## ORDER NO.CHM0602002CE

# Service Manua

**DVD Player** 

DVD-S42E / DVD-S42EG

**DL4.1 Mechanism Series** 

Color

(S).....Silver Type

(K).....Black Type



### **SPECIFICATIONS**

#### **Specifications**

AC230 V, 50 Hz Power supply:

Power consumption: Power consumption in standby mode:

1 W (approx.)

Dimensions: 430 (W) × 251 (D) × 43 (H) mm

Mass: 2.2 kg (approx.)

Signal system: PAL 625/50, PAL 525/60, NTSC

Operating temperature range: + 5 to + 35 °C Operating humidity range: 5 to 90 % RH (no condensation)

Discs played [8 cm (3 ") or 12 cm (5 ")]:

- (1) DVD (DVD-Video, DivX\*6,7)
- (2) DVD-RAM (DVD-VR, JPEG\*4,7, MPEG4\*5,7, DivX\*6,7, MP3\*2.7)
- (3) DVD-R (DVD-Video, DVD-VR, JPEG\*4,7, MP3\*2,7, DivX\* 6,7, MPEG4\*5,7) DVD-R DL (DVD-Video, DVD-VR)
- (4) DVD-RW (DVD-Video, DVD-VR, JPEG\*4,7, MP3\*2,7,DivX\* 6,7, MPEG4\*5,7)
- (5) +R/+RW (Video) +R DL (Video)
- (6) CD, CD-R / CD-RW (CD-DA, Video CD, SVCD\*1, MP3\*2,7, WMA\*3,7, JPEG\*4,7, MPEG4\*5,7, DivX\*6,7, HighMAT Level 2 (Audio and Image))
- \*1 Conforming to IEC62107
- \*2 MPEG-1 Layer 3, MPEG-2 Layer 3
- \*3 Windows Media Audio Ver.9.0 L3

1

Not compatible with Multiple Bit Rate (MBR)

- 4 Exif Ver2.1 JPEG Baseline files
  - Picture resolution: between 160 x 120 and 6144 x 4096 pixels (Sub sampling is 4:0:0, 4:2:2, 4:2:0, 4:4:4)
- \*5 MPEG4 data recorded with the Panasonic SD multi cameras or DVD video recorders conforming to SD VIDEO specifications (ASF standard) /MPEG4 (Simple Profile) video system/G.726 audio system
- \*6 Plays all versions of DivX video (including DivX6) with standard playback of DivX media files. Certified to the DivX

Home Theater Profile.

GMC (Global Motion Compensation) not supported.

\*7 The total combined maximum number of recognizable audio, picture and video contents and groups: 4000 audio, picture and video contents and 400 groups.

Video output:

Output level: 1 Vp-p (75  $\Omega$ )

Output terminal: Pin jack (1 system)/AV

S video output:

Y output level: 1 Vp-p (75  $\Omega$ )

C output level: NTSC; 0.286 Vp-p (75  $\Omega$ )

PAL; 0.300 Vp-p (75  $\Omega$ )

Output terminal: AV

Component video output: [NTSC: (480)p/(480)i,

PAL: (576)p/(576)i]

Y output level: 1 Vp-p (75  $\Omega$ ) P B output level: 0.7 Vp-p (75  $\Omega$ ) P R output level: 0.7 Vp-p (75  $\Omega$ )

Output terminal: Pin jack (Y: green, P B : blue,

PR:red)

Number of terminals: 1 system

RGB video output:

R output level: 0.7 Vp-p (75  $\Omega$ ) G output level: 0.7 Vp-p (75  $\Omega$ ) B output level: 0.7 Vp-p (75  $\Omega$ )

Output terminal: AV

Video performance:

Horizontal resolution: More than 500 lines
Video S/N ratio: More than 65dB

Audio output:

Output level: 2 Vrms (1 kHz, 0 dB)

Output terminal: Pin jack/AV

Number of terminals:

2 channel: 1 system

Audio performance:

(1) Frequency response:

DVD (linear audio): 4 Hz-22 kHz (48 kHz sampling)

4 Hz-44 kHz (96 kHz sampling)

CD audio: 4 Hz-20 kHz

(2) S / N ratio:

CD audio: 115 dB

(3) Dynamic range:

DVD (linear audio): 102 dBCD audio: 98 dB

(4) Total harmonic distortion:

● CD audio: 0.003 %

Digital audio output:

Coaxial digital output: Pin jack

Pickup

Wave length: 662 nm / 785 nm
Laser power: CLASS 2 / CLASS 3A

Note:

Specifications are subject to change without notice.

Mass and dimensions are approximate.

Solder:

#### This model uses lead free solder (PbF).

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MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

This product is licensed under the MPEG-4 Visual patent portfolio license for the personal and non-commercial use of a consumer for (i) encoding video in compliance with the MPEG-4 Visual Standard ("MPEG-4 Video") and/or (ii) decoding MPEG-4 Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed by MPEG LA to provide MPEG-4 Video. No license is granted or shall be implied for any other use. Additional information including that relating to promotional, internal and commercial uses and licensing may be obtained from MPEG LA, LLC. See <a href="http://www.mpegla.com">http://www.mpegla.com</a>.

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WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.



Official DivX® Certified product.
Plays all versions of DivX® video (including DivX®6) with standard playback of DivX® media files.
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### **⚠ WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

# **Panasonic**

## 1. IMPORTANT SERVICE INFORMATION

### **1.1. Notes**

When you replace EEPROM or exchange MODULE PCB, you have to take "Manual for customer" to the customer with unit. (also in the case of unit exchange)
Please take and use "Manual for customer" from below.

- 1. Come with MODULE PCB or EEPROM (Service part).
- 2. Make a photocopy section 1.3. "Manual for customer" on this service manual.

"Manual for customer" has important information for "DivX Video-on-Demand Service" user. Please don't forget take it to the customer with unit!

#### 1.2. About DivX

#### 1.2.1. DivX

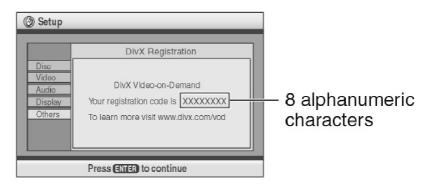
A video compression format developed by DivXNetworks, Inc. that compresses video files without any considerable loss of video quality.

1.2.2. About DivX Video-on-Demand Content

DivX Video-on-Demand (VOD) content is encrypted for copyright protection. In order to play DivX VOD content on this unit, you first need to register the unit.

Follow the on line instructions for purchasing DivX VOD content to enter the unit's registration code and register the unit. For more information about DivX VOD, visit www.divx.com/vod.

# Display the unit's registration code



- We recommend that you make a note of this code for future reference.
- After playing DivX VOD content for the first time, another registration code is then displayed in "DivX Registration". Do not use this registration code to purchase DivX VOD content. If you use this code to purchase DivX VOD content, and then play the content on this unit, you will no longer be able to play any content that you purchased using the previous code.
- If you purchase DivX VOD content using a registration code different from this unit's code, you will not be able to play this content. ("Authorization Error" is displayed.)

# Regarding DivX content that can only be played a set number of times

Some DivX VOD content can only be played a set number of times. When you play this content, the remaining number of plays is displayed. You cannot play this content when the number of remaining plays is zero. ("Rented Movie Expired" or "Rental Expired" is displayed.)

When playing this content

- The number of remaining plays is reduced by one if –you press [♣] or [SETUP].
  - -you press [■] (STOP). [Press [■] (PAUSE) to stop play.]

- -you press [ | ◀◀ ▶▶| ] (SKIP) or [ ◀◀ ▶▶] (SEARCH) etc. and arrive at another content or the start of the content being played.
- Resume (Stop) and Marker (Play Menu) functions do not work

## 1.3. Manual for Customer

## 2. SAFETY PRECAUTIONS

### 2.1. GENERAL GUIDELINES

- 1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
- 2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
- 3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

#### 2.1.1. LEAKAGE CURRENT COLD CHECK

- 1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
- 2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to thechassis, the reading should be between 1M  $\Omega$  and 5.2M  $\Omega$ . / When the exposed metal does not have a return path to the chassis, the reading must be  $\infty$ .

Hot-Check Circuit

AC VOLTMETER

O 0.15µF

TO APPLIANCES COLD
EXPOSED WATER PIPE
METAL PARTS 1500Ω 10W

COLD
WATER PIPE
(EARTH GROUND)

### 2.1.2. LEAKAGE CURRENT HOT CHECK (See Figure 1.)

- 1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
- 2. Connect a 1.5k  $\Omega$ , 10 watts resistor, in parallel with a 0.15  $\mu$  F capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
- 3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
- 4. Check each exposed metallic part, and measure the voltage at each point.
- 5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
- 6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current mu3st not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

# 3. PREVENTION OF ELECTRO STATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

- 1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available dischargingESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
- 2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as alminum foil,

- to prevent electrostatic charge buildup or exposure of the assembly.
- 3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
- 4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
- 5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
- 6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, alminum foil or comparableconductive material).
- 7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

#### **Caution**

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise hamless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient todamage an ES device).

# 4. PRECAUTION OF LASER DIODE

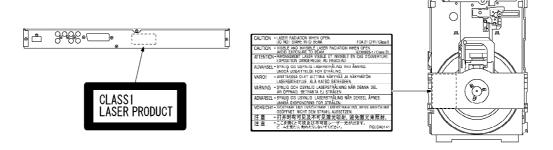
#### CAUTION:

This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens. Wave length: 662 nm/785 nm

Maximum output radiation power from pickup: 100  $\mu$  W/VDE

Laser radiation from the pickup lens is safety level, but be sure the followings:

- Do not disassemble the optical pickup unit, since radiation from exposed laser diode is dangerous.
- Do not adjust the variable resistor on the pickup unit. It was already adjusted.
- 3. Do not look at the focus lens using optical instruments.
- 4. Recommend not to look at pickup lens for a long time.



CAUTION!

THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

# 5. SERVICE CAUTION BASED ON LEGAL RESTRICTIONS

# 5.1. General description about Lead Free Solder (PbF)

The lead free solder has been used in the mounting process of all electrical components on the printed circuit boards used for this equipment in considering the globally environmental conservation.

The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30°C (86°F) more than that of the normal solder.

#### Definition of PCB Lead Free Solder being used

The letter of "PbF" is printed either foil side or components side on the PCB using the lead free solder. (See right figure)	PbF
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Service caution for repair work using Lead Free Solder (PbF)

- The lead free solder has to be used when repairing the equipment for which the lead free solder is used. (Definition: The letter of "PbF" is printed on the PCB using the lead free solder.)
- To put lead free solder, it should be well molten and mixed with the original lead free solder.
- Remove the remaining lead free solder on the PCB cleanly for

soldering of the new IC.

- Since the melting point of the lead free solder is higher than that of the normal lead solder, it takes the longer time to melt the lead free solder.
- Use the soldering iron (more than 70W) equipped with the temperature control after setting the temperature at 350±30°C (662 ±86°F).

**Recommended Lead Free Solder (Service Parts Route.)** 

The following 3 types of lead free solder are available through the service parts route.

- RFKZ03D01K-----(0.3mm 100g Reel)
- RFKZ06D01K-----(0.6mm 100g Reel)
- RFKZ10D01K-----(1.0mm 100g Reel)

#### Note

\* Ingredient: tin (Sn) 96.5%, silver (Ag) 3.0%, Copper (Cu) 0.5%, Cobalt (Co) / Germanium (Ge) 0.1 to 0.3%

# 6. PREVENTION OF STATIC ELECTRICITY DISCHARGE

The laser diode in the traverse unit (optical pickup) may brake down due to static electricity of clothes or human body. Use due caution to electrostatic breakdown when servicing and handling the laser diode.

# 6.1. Grounding for electrostatic breakdown prevention

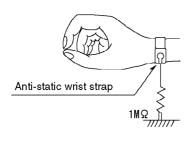
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

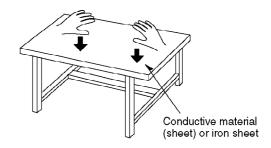
### 6.1.1. Worktable grounding

1. Put a conductive material (sheet) or iron sheet on the area where the optical pickup is placed, and ground the sheet.

### 6.1.2. Human body grounding

1. Use the anti-static wrist strap to discharge the static electricity form your body.





## 6.1.3. Handling of optical pickup

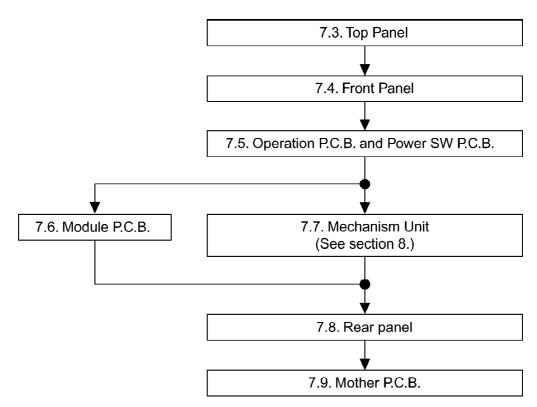
- 1. To keep the good quality of the optical pickup maintenance parts during transportation and before installation, the both ends of the laser diode are short-circuited. After replacing the parts with new ones, remove the short circuit according to the correct procedure. (See this Technical Guide.)
- 2. Do not use a tester to check the laser diode for the optical pickup. Failure to do so will damage the laser diode due to the power supply in the tester.

## 6.2. Handling Precautions for Traverse Unit (Optical Pickup)

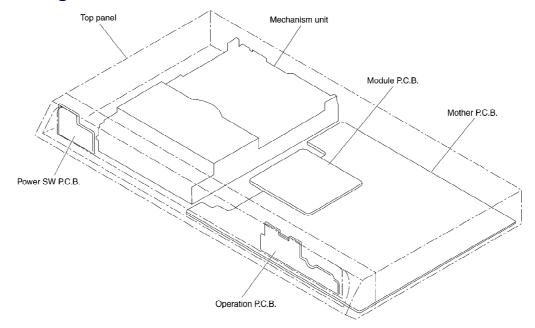
- 1. Do not give a considerable shock to the traverse unit (optical pickup) as it has an extremely high-precise structure.
- 2. When replacing the optical pickup, install the flexible cable and cut its short land with a nipper. See the optical pickup replacement procedure in this Technical Guide. Before replacing the traverse unit, remove the short pin for preventingstatic electricity and install a new unit. Connect the connector as short times as possible.
- 3. The flexible cable may be cut off if an excessive force is applied to it. Use caution when handling the cable.
- 4. The half-fixed resistor for laser power adjustment cannot be adjusted. Do not turn the resistor.

# 7. DISASSEMBLING THE CASING AND CHECKING P.C.B.S

# 7.1. Disassembly Procedure

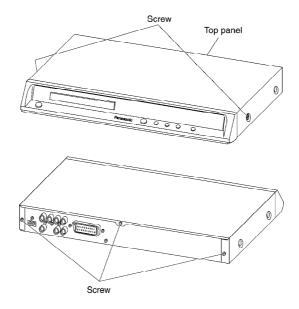


## 7.2. Casing Parts and P.C.B. Positions



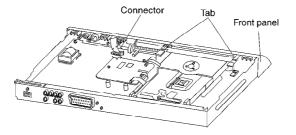
# 7.3. Top Panel

## 1. Unscrew the screws.

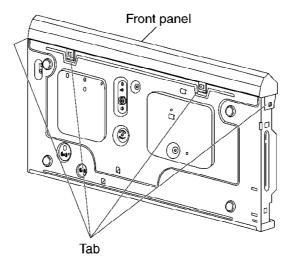


## 7.4. Front Panel

1. Release the tabs and connector.

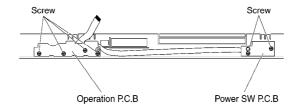


## 2. Release the tabs.



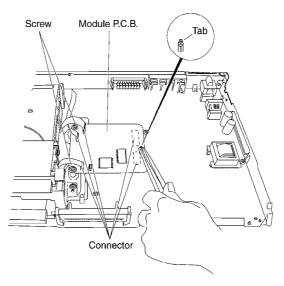
# 7.5. Operation P.C.B. and Power SW P.C.B.

## 1. Unscrew the screws.



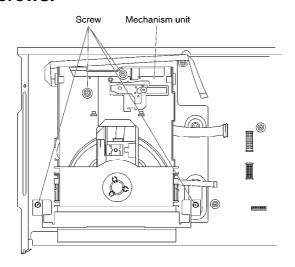
## 7.6. Module P.C.B.

- 1. Remove the connectors.
- 2. Unscrew the screws.
- 3. Press each tab with the nipper to module PCB vertically.

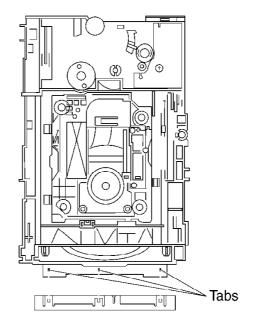


## 7.7. Mechanism Unit

1. Unscrew the screws.

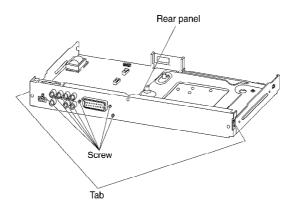


2. Release the tabs.



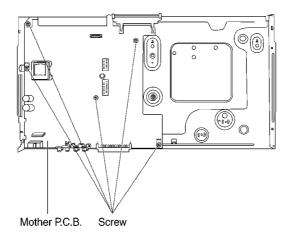
# 7.8. Rear panel

- 1. Unscrew the screws
- 2. Release the tabs.



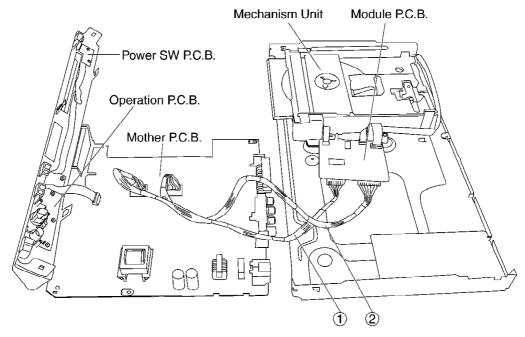
# 7.9. Mother P.C.B.

1. Unscrew the screws.

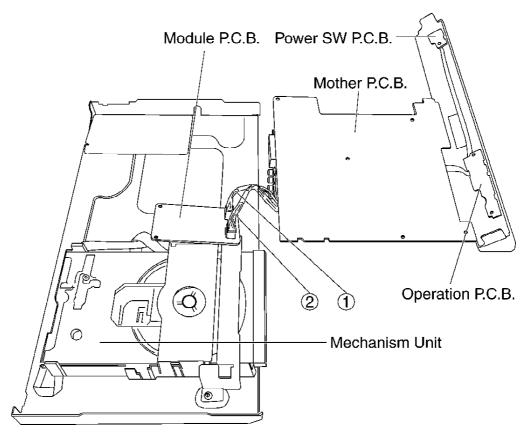


## 7.10. Service Position

# 7.10.1. Servicing position of the Module P.C.B.



7.10.2. Servicing position of the Mother P.C.B.

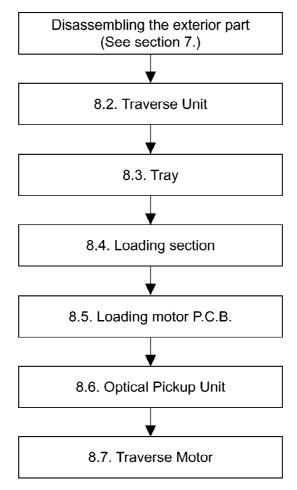


7.10.3. List of the Extension Cables

1	VUC8026	14pins	PS8101(Module P.C.B.) — FP3501(Mother P.C.B.)	
2	RFKZ0106	20pins	PS8301(Module P.C.B.) — FP3502(Mother P.C.B.)	

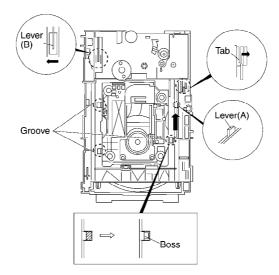
# 8. ASSEMBLING AND DISASSEMBLING THE MECHANISM UNIT

# 8.1. Disassembly Procedure

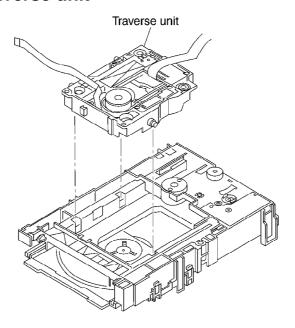


## 8.2. Traverse Unit

- 1. Slide the lever (A) in the arrow direction (to the opposite side) till it stops.
- 2. Slide the lever (A) further by bending the tab at the right side of the lever A in the right direction. (The right groove opens and the boss becomes seen.)
- 3. Open the lever (B) to left. (The 2 grooves at the left side open.)

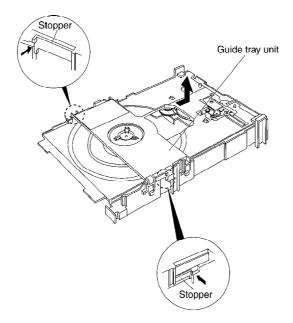


4. Remove the traverse unit

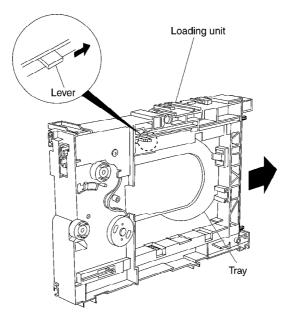


# 8.3. Tray

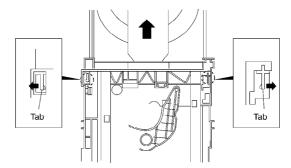
1. Slide the guide tray unit while pressing the stopper in the arrow direction, and remove the guide tray unit.



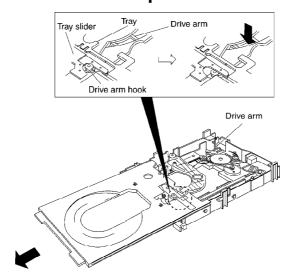
- 2. Raise the loading unit.
- 3. Slide the lever in the arrow direction till it stops and pull the tray out.



4. Spread the tabs at the both sides and pull the tray out. (The tray slides a little forward and stops.)

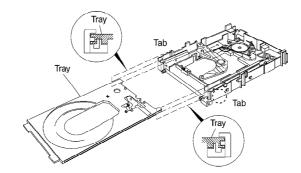


5. Remove the drive arm concave phase from the tray slider and tray.

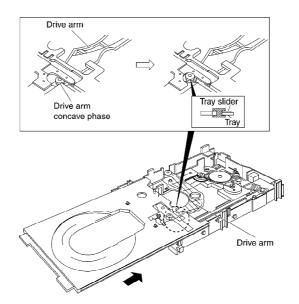


<Assembling the tray unit>

- 1. Insert a part of the tray into the unit sliding over the groove on the mechanical chassis unit.
- 2. Insert the tray to the point before the tab of the mechanical chassis unit.

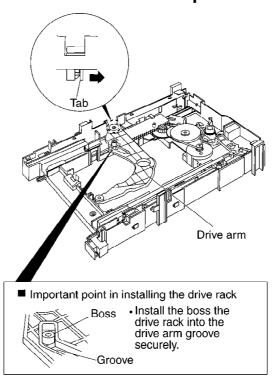


- 3. Hook the drive arm concave phase over the tray and the tray slider.
- 4. Press in the tray.
- 5. Make sure that the tray and the drive arm move smoothly.

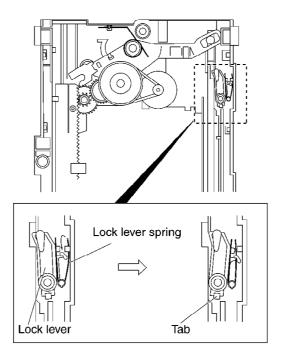


# 8.4. Loading section

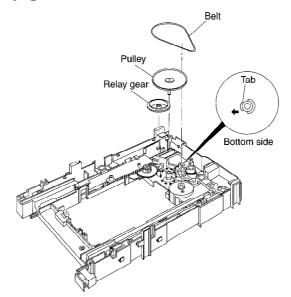
1. Spread the tabs at the both sides and push out the drive arm shaft.



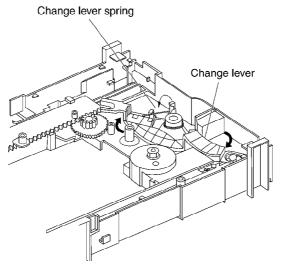
- 2. Hook the lock lever spring on the lock lever projection part temporarily.
- 3. Unlock the tab and remove the lock lever.



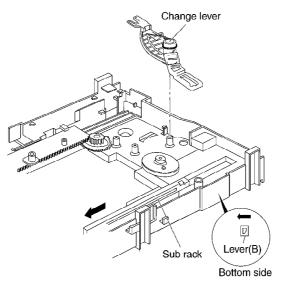
- 4. Remove the belt.
- 5. Unlock the tab and remove the pulley.
- 6. Remove the relay gear.



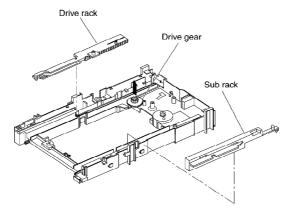
- 7. Turn the change lever in the arrow direction till it stops.
- 8. Hook the change lever spring on the change lever project part temporarily.



9. Pull the lever (B) in the bottom side to your side and remove the change lever.

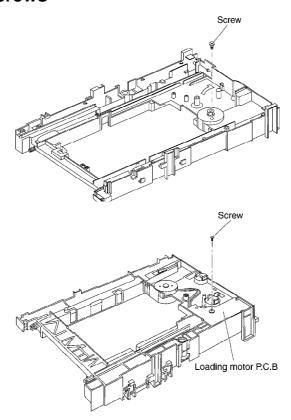


10. Remove the drive rack, the sub rack and the drive gear.



8.5. Loading motor P.C.B.

## 1. Unscrew the screws

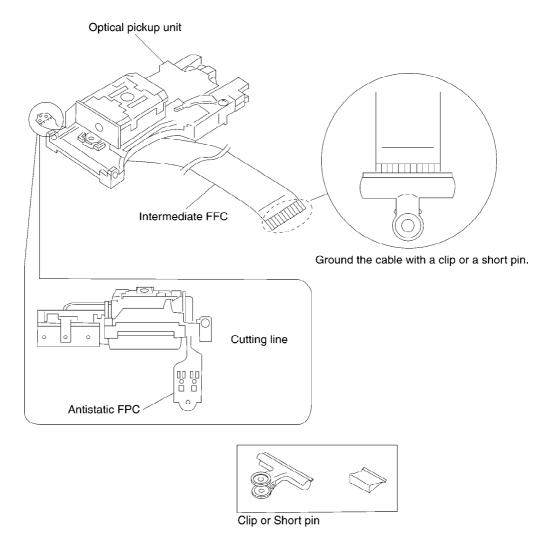


## 8.6. Optical Pickup Unit

## 8.6.1. Cautions to Be Taken in Handling the Optical Pickup Unit

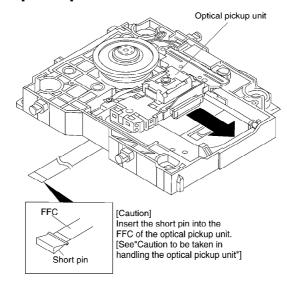
The laser diode in the optical pickup unit may be damaged due to electrostatic discharge generating from clothes or human body. Use due caution to electrostatic discharge damage when servicing the laser diode.

- 1. Do not give a considerable shock to the optical pickup unit as it has an extremely high-precise structure.
- 2. To prevent the laser diode from the electrostatic discharge damage, the Intermediate FFC of the optical pickup unit removed from the PCB should be short-circuited with a short pin or a clip.
- 3. The Intermediate FFC may be cut off if an excessive force is applied to it. Use caution when handling the Intermediate FFC.
- 4. The antistatic FPC is connected to the new optical pickup unit. After replacing the optical pickup unit and connecting the fintermediate FFC, cut off the antistatic FPC.

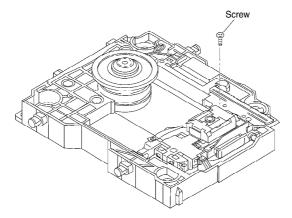


## 8.6.2. Procedure for Disassembling the Optical Pickup Unit

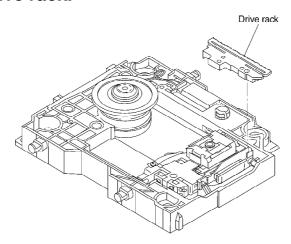
## 1. Move the optical pickup unit in the arrow direction till it stops.



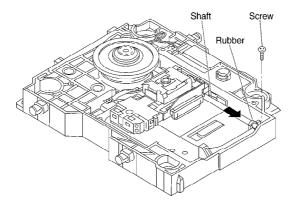
## 2. Unscrew the screws.



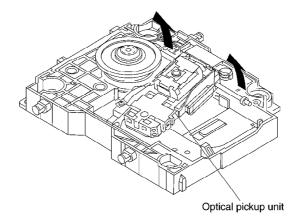
## 3. Remove the drive rack.



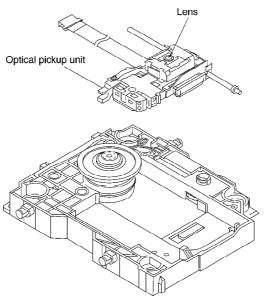
- 4. Unscrew the screw
- 5. Slide the shaft in the arrow direction.



6. Lift the optical pickup unit with the shaft.

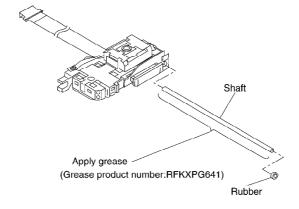


# 7. Remove the optical pickup unit.



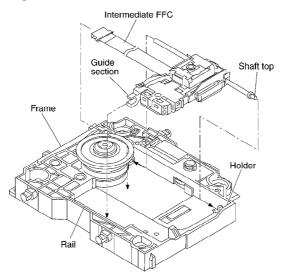
- [Caution]
  1.Do not give a considerable shock to the optical pickup unit as it has an extremely high-precise structure.
  2.Do not touch the lens in the optical pickup unit.

# 8. Pull the shaft and the rubber out.

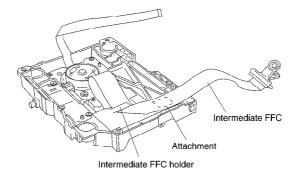


<Assembling the optical pickup unit>

- 1. Pass the intermediate FPC through the frame hole.
- 2. Align the guide section of the optical pickup unit with the rail.
- 3. Install the shaft top to the holder.

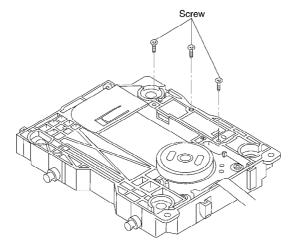


4. The intermediate FFC is fixed as shown below.

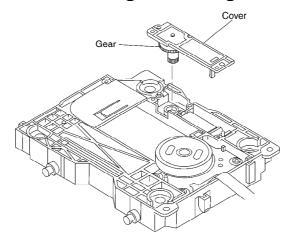


## 8.7. Traverse Motor

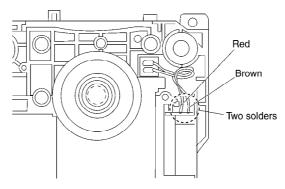
1. Unscrew the screws.



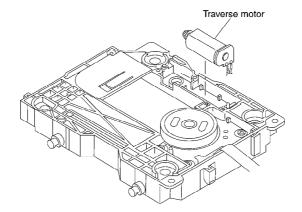
# 2. Remove the cover while lifting the inner gear.



# 3. Remove the solders.



## 4. Remove the traverse motor.



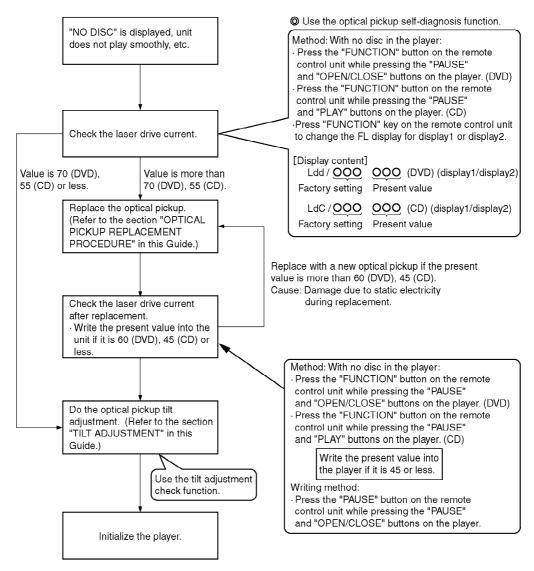
# 9. SELF-DIAGNOSIS FUNCTION AND SERVICE MODES

## 9.1. Optical Pickup Breakdown Diagnosis

The optical pickup self-diagnosis function and tilt adjustment check function have been included in this unit. When repairing, use the following procedure for effective Self-diagnosis and tilt adjustment.Be sure to use the self-diagnosis function before replacing the optical pickup when "NO DISC" is displayed. As a guideline, you should replace the optical pickup when the value of the laser drive current is more than 55.

#### Note:

Press the power button to turn on the power, and check the value within three minutes before the unit warms up. (Otherwise, the result will be incorrect.)



## 9.2. Service Mode Table 1

The service modes can be activated by pressing various button combination on the player and remote control unit.

Player buttons	Remote control unit buttons	Application	•
PAUSE + OPEN/CLOSE	0	Displaying the UHF display F	Refer to 9.3. Self- Diagnos Function Display)
	5	Jitter check, tilt adjustment *Display shows J_xxx/yyy_zz "yyy" and "zz" shown to the right have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focus drive value. Refer to section 10.4. for Optical Pickup Tilt Adjustment Procedure.	Refer to 11.4. Op Pickup 1 Adjustm
	6	Checking the region numbers and broadcast system	
	7	Checking the program version	Check ti FLASH i program
	9	<b>Lighting Confirmation Function of Display Tube</b>	
	FUNCTION	Checking the laser drive current	Refer to Optical I Replace Procedu
	PAUSE	Writing the laser drive current value after replacing the optical pickup (do not use for anything other than optical pickup replacement)	
PAUSE QUICK OSD OPEN/CLOSE		Initializing the DVD player (restoring factory preset settings)	Refer to 9.5. Initia DVD pla

# 9.3. DVD Self Diagnostic Function-Error Code

Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	D
	U, H error				
U11	Focus error				
U15	Unfinalized DVD-R				
H01	Tray loading error				
H02	Spindle servo error	(Spindle servo, DV3.2 (IC8001) SP motor, CLV servo error)			
H03	Traverse servo error				
H04	Tracking servo error				
H05	Seek error				
H06	Power error	Cannot switch off the power because of the panel and system computer communication error			
H07	Spindle motor drive error		Spindle motor ass'y		
	DSC related				
F500	DSC error	DV3.2 (IC8001) stops in the occurence of servo error (starup, focus error, etc)	Optical pickup	DV3.2 (IC8001)	
F501	DSC not Ready	DSC-system computer communication error (Communication failure caused by idling of DSC)	DV3.2 (IC8001)		
F502	DSC Time out error	Similar disposal as F500	Optical pickup	DV3.2 (IC8001)	
F503	DSC communication Failure	Communication error (result error occured although communication command was sent)	DV3.2 (IC8001)	EEPROM (IC8611)	
F505	DSC Attention error	Similar disposal as F500	Optical pickup	DV3.2 (IC8001)	
F506	Invalid media	Disc is flipped over, TOC unreadable, incompatible disc	DISC	DV3.2 (IC8001)	
	ODC related			-	
F600	Access failure to management information caused by demodulation error	Operation stopped because navigation data is not accessible caused by the demodulation defect	DV3.2 (IC8001)		

Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	D
F601	Indeterminate sector ID requested	Operation stopped caused by the request to access abnormal ID data	DV3.2 (IC8001)		
F602	Access failure to LEAD-IN caused by demodulation error	LEAD IN data unreadable			
F603	Access failure to KEYDET caused by demodulation error	Access failure to CSS data of disc			
F610	ODC abnormality	No permission for command execution	DV3.2 (IC8001)		
F611	6626 QCODE don't read Error	Access failure to seek address in CD series	DV3.2 (IC8001)		
F612	No CRC OK for a specific time	Access failure to ID data in DVD series	DV3.2 (IC8001)		
F630	No reply to KEY DET enquiry	(for internal use only)			
F631	CPPM KEY DET is not available till the FILE terminal	(CPPM file system is unreadable caused by scratches)	DISC	CPPM (*1)	
F632	CPPM KEY DET is not available	Been revoked or falsified	DISC	EEPROM (IC8611)	C
	Disc code				
F103	Illegal highlight Position HIC Error	Big possibility of disc specification violation during highlight display	DISC		
F4FF	Force initialize failure (time out)		EEPROM (IC8611)	DV3.2 (IC8001)	
	Micro computer error				
F700	MBX overflow	When replying message to disc manager			
F701	Message command does not end	Next message is sent before replying to disc manager			
F702	Message command changes	Message is changed before it is sent as a reply to disc manager			
F880	Task number is not appropriate	Message coming from a non-existing task			

Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	D
F890	Sending message when message is being sent to AV task	Sending message to AV task			
F891	Message couldn't be sent to AV task	Begin sending message to AV task			
F893	FROM		FROM	DV3.2	
	falsification		(IC8651)	(IC8001)	
F894	EEPROM abnormality		EEPROM (IC8611)	communication	
F895	Language area abnormality	Firm version agreement check for factory preset setting failure prevention	FROM (IC8651)		
F896	No existence model	Firm version agreement check for factory preset setting failure prevention			
F897	Initialize is not completed	Initialize completion check for factory preset setting failure prevention			
F898	Disagreement of hardware and software	Unsuitable combination of AV DECORDER, SDRAM and FLASH ROM (firmware)			
F8A0	Message command is not appropriate	Begin sending message to AV task			

### Note:

An error code will be canceled if a power supply is turned OFF.

\*1: CPPM is the copy guard function beforehand written in the disk for protection of copyrights.

9.4. Last Error Code saved during NO PLAY

Error code	Error Content	System computer	Setting task	System computer i error code
F0BF	6) Cannot playback because physical layer is not recoginizable	PCND_NOPLAY PHYSICAL 0x50	DriveManager	0xDOBF
F0C0	8) DVD: Cannot playback because it is not DVD Video/Adio/VR	PCND_NOPLAY VIDEO 0x70	DiscManager	0xDOC0
F0C1	9) DVD: Prohibited by the restricted region code	PCND_NOPLAY RCD 0x80	DiscManager	0xDOC1
F0C2	A) DVD: PAL restricted playback	PCND_NOPLAY PAL 0x90	DiscManager	0xDOC2
F0C3	B) DVD: Parental lock setting prohibits the playback of the entire title	PCND_NOPLAY PTL 0xA0	DiscManager	0xDOC3
F0C4	C) VCD: Prohibited because it is in PHOTO CD fromat	PCND_NOPLAY PHOTO CD 0xB0	DiscManager	0xDOC4
F0C5	VCD/CD: Prohibited because it is CDROM without CD-DA	PCND_NOPLAY CDROM 0xC0	DiscManager	0xDOC5

## 9.5. Service mode table 2

Pressing various button combinations on the player and remote control unit can activate the service modes.

Item	Player mode and button combination	Function	Display	Cancellation method
Jitter check	In STOP mode within disc, press PAUSE and OPEN/CLOSE buttons on the player, and "5" button on the remote control unit. (Press "FL SELECT" key on the remote control unit to change the FL display for Display1 or Display2.)	Jitter check Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more.	J_xxx/yyy_zz(display1/display2)  The Focus drive value Read error counter Jitter rate Jitter cate Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation.	Press STOP or OPEN/CLOSE button.
Error code check	In STOP (no disc) mode, press PAUSE and OPEN/CLOSE buttons on the player, and "0" button on the remote control unit. * With pointing of cursor up and down on display, the panel controller switches serial number of history and sends out the command accordingly.	Error code check The latest error code stored in EEPROM is displayed.	Error code (play_err) is expressed in the following convention.  Error code = 0 x DAXX is expressed: → nn UXX  Error code = 0 x DBXX is expressed: → nn HXX  Error code = 0 x DXXX is expressed: → nn FXXX  Error code = 0 x C000 is expressed: → nn F  * "nn" denotes the serial number of history.(01~20)  * "xx" denotes the error code.	Cancelled automatically 5 seconds later.
Initial setting of laser drive current	In STOP (no disc) mode, press PAUSE and OPEN/CLOSE buttons on the player, and PAUSE button on the remote control unit. (Press "FL SELECT" key on the remote control unit to change the FL display for Display1or Display2.)	Initial setting of laser drive currentInitial current value for each of DVD laser and CD laser is separately saved in EEPROM.	LdO/034_028(display1/display2)  \[ \bigcap \text{ \text{\text{\text{\text{DVD laser current measurement}}} \\ \text{ \text{\text{LSEP} VD laser current measurement}} \\ \text{ \text{LSEP} CD laser current measurement mode} \]  The value denotes the current in decimal notation. The above example shows the initial current is 34mA and 28mA for DVD laser and CD laser respectively when the laser is witched on.	Cancelled automatically 5 seconds later.
DVD laser drive current measurement	In STOP (no disc) mode, press PAUSE and OPEN/CLOSE buttons on the player, and FUNCTION button on the remote control unit. (Press "FL SELECT" key on the remote control unit to change the FL display for Display1 or Display2.)	DVD laser drive current measurement .DVD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when POWER button on the player is switched off.)	Ldd/034_032(display1/display2)	Cancelled automatically 5 seconds later.
ADSC internal RAM data check	In STOP (no disc) mode, press PAUSE and OPEN/CLOSE buttons on the player, and RETURN button on the remote control unit. (Press "FL SELECT" key on the remote control unit to change the FL display for Display1 or Display2.)	ADSC internal RAM data check -ADSC internal RAM data is read out and displayed. Change the address with CLEAR key operation to show the data for 11 addresses.	A_FbO/A_0000(display1/display2)  TRAM data for specified address Address ADSC internal RAM data check mode  The value is shown in hexadecimal notation. The above example shows the data in ADSC address DFAh is 6901h.	Press STOP or OPEN/CLOSE button.
Servo process display	In STOP (no disc) mode, press PAUSE and PLAY buttons on the player, and "7" button on the remote control unit.	Servo process display The servo process from STOP to ACCESS is displayed.		Pull out the AC cord.
CD laser drive current measurement	In STOP (no disc) mode, press PAUSE and PLAY buttons on the player, and FUNCTION button on the remote control unit. (Press "FL SELECT" key on the remote control unit to change the FL display for Display1 or Display2.)		LdC/028_026(display 1/display2)  Measured current Initial current stored in EEPROM CD laser current measurement mode  The value denotes the current in decimal notation. The above example shows the initial current is 28mA and the measured value is 26mA.	Cancelled automatically 5 seconds later.

Item	Player mode and button combination	Function	Display	Cancellation method
Version display	In STOP (no disc) mode, press PAUSE and OPEN/CLOSE buttons on the player, and "7" button on the remote control unit. (Press "FL SELECT" key on the remote control unit to change the FL display for Display1 or Display2.)	Version display	srrr/xxyzzz(display1/display2)  A A A System controller release number System controller model number System controller generation Panel controller release number Panel controller release number Panel controller model number When check this item, connect this player to monitor TV and check with watching the display shown on the monitor.	Cancelled automatically 5 seconds later.
Lighting of display tube	In STOP (no disc) mode, press PAUSE and OPEN/CLOSE buttons on the player, and '9' button on the remote control unit.	Lighitng of display tube		Repeat the same operation.
Dealer's lock	In STOP mode, press STOP button on the player, and POWER button on the remote control unit for 1 second or longer.	Dealer's lock The lock is switched ON or OFF. When dealer's lock is ON, it prohibits switching off of the secondary power and tray opening. When the lock is switched, its ON/OFF status is stored in EEPROM.	- "LOC" sign appears when dealer's lock is switched on, or when secondary power key or tray opening key is pressed while the lock is on"UNLOC" sign appears when dealer's lock is switched off.	Repeat the same operation.
Initialization	In STOP (no disc) mode, press PAUSE, QUICK OSD and OPEN/CLOSE buttons on the player for 3 seconds or longer.	Initialization User settings are cancelled and player is initialized to factory setting.	"Inl"	
Region display	In STOP (no disc) mode, press PAUSE and OPEN/CLOSE buttons on the player, and "6" button on the remote control unit.	Region display	wxyzzz  ↑↑↑ ↑ Panel controller jumper information N: NTSC / 6: PAL60 N: noPAL / P: PAL Region No.	Cancelled automatically 5 seconds later.
Item	Player mode and button combination	Function	Display	Cancellation method
Timer 1 check	In STOP (no disc) mode, press PAUSE and PLAY buttons on the player, and '5' button on the remote control unit. (Press "FL SELECT" key on the remote control unit to change the FL display for Display1 or Display2.	Timer 1 check Laser operation timer Operation time is measured separately for DVD laser and CD laser.	t11234/5678(display1/display2) Shown to the display1 is DVD laser time, and to the display2 CD laser time. Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999".	Cancelled automatically 5 seconds later.
Timer 1 reset	While displaying Timer 1 data, press STOP and PLAY buttons on the player, and "5" button on the remote control unit. (Press "FL SELECT" key on the remote control unit to change the FL display for Display1 or Display2.	Timer 1 reset Laser operation timer Operation time of both DVD laser and CD laser is reset all at once.	t10000/0000(display1/display2)	Cancelled automatically 5 seconds later.
Timer 2 check	In STOP (no disc) mode, press PAUSE and PLAY buttons on the player, and "6" button on the remote control unit. (Press "FL SELECT" key on the remote control unit to change the FL display for Display1 or Display2.	Timer 2 check Spindle motor operation timer	t21234/5(display1/display2) Time is shown in 5 digits of decimal notation in a unit of 10 hours. "00000" will follow "99999".	Cancelled automatically 5 seconds later.
Timer 2 reset	While displaying Timer 2 data, press STOP and PLAY buttons on the player and "6" button on the remote control unit.  (Press "FL SELECT" key on the remote control unit to change the FL display for Display1 or Display2.	Timer 2 reset Spindle motor operation timer	t20000/0(display1/display2)	Cancelled automatically 5 seconds later.

## 9.6. Sales demonstration lock function

This function prevents discs from being lost when the unit is used for sales demonstrations by disabling the disc eject function. "LOC" is displayed on the unit, and ordinary operation is disabled.

## 9.6.1. **Setting**

The sales demonstration lock is set by simultaneously pressing STOP button on the player and POWER button on the remote control unit for 1 second or longer.

#### 9.6.2. Cancellation

The lock can be cancelled by the same procedure as used in setting. ("UNLOC" is displayed on cancellation. Disconnecting the power cable from power outlet does not cancel the lock.)

## 9.7. Handling After Completing Repairs

Use the following procedure after completing repairs.

#### 9.7.1. Method

Confirm that the power is turned on:

- 1. Press the "OPEN/CLOSE" button to close the tray.
- 2. Press the "POWER" button to turn off the power.
- 3. Disconnect the power plug from the outlet.

#### 9.7.2. Precautions

Do not disconnect the power plug from the outlet with the tray still open, then close the tray manually.

## 10. SERVICE PRECAUTIONS

## 10.1. Recovery after the dvd player is repaired

- When FROM or module P.C.B. is replaced, carry out the recovery processing to optimize the drive.
  - Playback the recovery disk to process the recovery automatically.
- Recovery disc [Product number: RFKZD03R005] (RFKZD03R004 can not be recovered as a partial item.
  - So use the new recovery disc, RFKZD03R005.)
- Performing recovery
- 1. Load the recovery disc RFKZD03R005 on to the player and run it.
- 2. Recovery is performed automatically. When it is finished, a message appears on the screen.
- 3. Remove the recovery disc.
- 4. Turn off the power.

#### Note:

This unit requires no initialization process carried out after the traditional DVD players were repaired.

When the recovery measures are taken, the customer setting will return to the factory setting as same as the procedure described in item of "Initialization" in 8.5. is carried out. Write down the contents of the setting before recovery processing, and reset the player.

## 10.2. Firmware version-up of the DVD player

- The firmware of the DVD player may be renewed to improve the quality including operationability and playerbility to the substandard discs.processing to optimize the drive.

  The recovery disc has also firmware version-up.
- After version-up, recovery processing is executed automatically.
- Part number of the recovery disc for version-up will be noticed when it is supplied.
- Updating firmware
  - 1. Load the recovery disc that is supplied to the player and run it.
- 2. Firmware version of the player is automatically checked. Appropriate message appears whenever necessary.
- 3. Using remote controller's cursor key, select whether version updating is to be done or not. (Selection of Yes/No)
- 4. a. If Yes is selected, version updating is performed.
  - b. If No is selected, only recovery is performed.
- 5. a. When updating is finished, remove the disc according to the message appearing on the screen.
  - b. Remove the disc according to the message appearing on the screen.
- 6. Turn off the power.

#### Note:

If the AC power supply is shut out during version-up due to a power failure, the version-up is improperly carried out.

In such a case, replace the FROM and carry out the version-up again.

# 11. ADJUSTMENT PROCEDURES

# 11.1. Service Tools and Equipment

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S15 or DVDT-S01
	TORX screw driver (T6)	Available on sales route. (T6) or RFKZ0185
Inspection	Extension cable (module P.C.B. to mother P.C.B.)	VUC8026
	Extension cable (module P.C.B. to mother P.C.B.)	RFKZ0106
Others	Hanari	VFK1784
	Grease	RFKXPG641
	Drysurf	RFKXGUD24
Confirmation	CD test disc	PVCD-K06 or any other commercially available disc
	VCD test disc	PVCD-K06 or any other commercially available disc
	Recovery disc	RFKZD03R005

## 11.2. Important points in adjustment

#### 11.2.1. Important points in optical adjustment

- Before starting optical adjustment, be sure to take anti-static measures.
- Optical pickup tilt adjustment is needed after replacement of the following components.
- 1. Optical pickup unit
- 2. Spindle motor unit
- 3. Optical pickup peripheral parts (such as rail)

#### **Notes**

Adjustment is generally unnecessary after replacing other parts of the traverse unit. However, make adjustment if there is a noticeable degradation in picture quality. Optical adjustments cannot be made inside the optical pickup. Adjustment isgenerally unnecessary after replacing the traverse unit.

#### 11.2.2. Important points in electrical adjustment

- Follow the adjustment procedures described in this Manual.

## 11.3. Storing and Handling Test Discs

- Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.
- 1. Do not place discs directly onto the workbench, etc., after use.

- 2. Handle discs carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store discs in a cool place where they are not exposed to direct sunlight or air from air conditioners.
- 3. Accurate adjustment will not be possible if the disc is warped when placed on a surface made of glass, etc. If this happens, use a new test disc to make optical adjustments.
- 4. If adjustment is done using a warped disc, the adjustment will be incorrect and some discs will not be playable.

## 11.4. Optical adjustment

## 11.4.1. Optical pickup tilt adjustment

Measurement point	Adjustment point	Mode	Disc
	Tangential adjustment screw	T01 (inner periphery) play	DVDR-S15 or DVD
	Tilt adjustment screw	T30 (central periphery) play T43 (outer periphery) play	
Measuring equipment		Adjustment value	
None (Main unit display for servicing is used.)		Adjust to the minimum jitt	er value.

#### 11.4.1.1. Adjustment procedure

- 1. While pressing PAUSE and OPEN/CLOSE buttons on the main unit, press "5" on the remote control unit.
- 2. Confirm that "J\_xxx/yyy\_zz" is shown on the front display.

#### For your information:

"yyy" and "zz" shown to the right have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focus drive value.

#### Note:

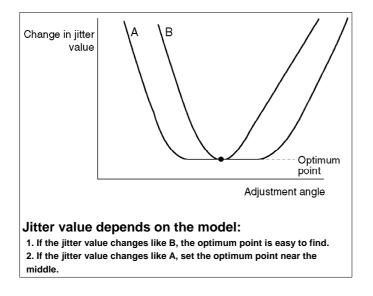
Jitter value appears on the front display.

- 3. Play test disc T30 (central periphery).
- 4. Adjust tangential adjustment screw so that the jitter value is minimized.
- 5. Play test disc T30 (central periphery).

- 6. Adjust tilt adjustment screw 1 so that the jitter value is minimized.
- 7. Play test disc T30 (central periphery).
- 8. Adjust tilt adjustment screw 2 so that the jitter value is minimized.
- 9. Repeat adjusting tilt adjustment screws 1 and 2 alternately until the jitter value is minimized.
- 10. Finally please reproduce T01 (inner periphery) and T43 (outer periphery) and check the jitter value. (Please readjust, when the jitter value is extremely different.)

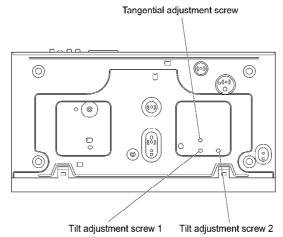
11.4.1.2. Important points

- 1. Make tangential adjustment first, and then make tilt adjustment.
- 2. Repeat adjusting two or three times to find the optimum point.
- 3. Finish the procedure with tilt adjustment.



#### Note:

When FFC has covered the adjustment screw, please insert a screwdriver, evading FFC(s).



11.4.1.3. Check after adjustment

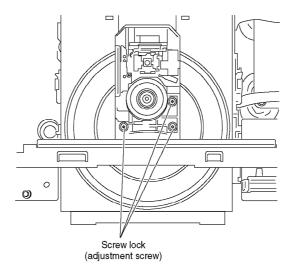
Play test disc or any other disc to make sure there is no picture degradation in the inner, middle and outer peripheries, and no audio skipping. After adjustment is finished, lock each adjustment screw in position using screw lock.

11.4.1.4. Procedure for screw lock

Please perform a screw lock in which by the side of the tip or head of an adjustment screw.

<When a screw lock is performed to the tip part side of an adjustment screw>

- 1. After adjustment, remove top panel.
- 2. After pulling out a tray to the position which does not become obstructive, remove clamper plate.
- 3. Fix adjustment screw with screw lock.
- 4. After fixing, reassemble clamper plate and top panel.

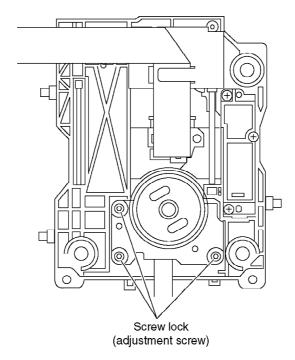


<When a screw lock is performed to the head side of an adjustment screw>

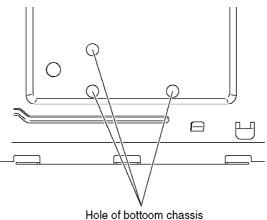
1. After adjustment, remove top panel, front panel, rear panel and

mechanism unit in this sequence.

- 2. Lay the mechanism unit upside down, and fix adjustment scwer with screw lock.
- 3. After fixing, reassemble mechanism unit, rear panel, front panel and top panel.



It is also possible to perform screw lock on the head of an adjustment screw after an adjustment end using an injector etc. from the hole at the bottom of a product (hole of bottom chassis), without decomposing.



# 12. ABBREVIATIONS

INIT	TAL/LOGO	ABBREVIATIONS
Α	A0~UP	ADDRESS
	ACLK	AUDIO CLOCK
	AD0~UP	ADDRESS BUS
	ADATA	AUDIO PES PACKET DATA
	ALE	ADDRESS LATCH ENABLE
	AMUTE	AUDIO MUTE
	AREQ	AUDIO PES PACKET REQUEST
	ARF	
	ASI	AUDIO RF
	ASO	SERVO AMP INVERTED INPUT
	ASYNC	SERVO AMPOUTPUT
		AUDIO WORD DISTINCTION
		SYNC
В	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	ВҮРАТН
	BYTCK	BYTE CLOCK
С	CAV	CONSTANT ANGULAR
	CBDO	VELOCITY
	CD	CAP. BLACK DROP OUT
	CDSCK	COMPACT DISC
	CDSRDATA	CD SERIAL DATA CLOCK
		CD SERIAL DATA
	CDRF	CD RF (EFM) SIGNAL
	CDV	COMPACT DISC-VIDEO
		CHANNEL DATA
	CKSL	SYSTEM CLOCKSELECT
	CLV	CONSTANT LINEAR VELOCITY
	COFTR	CAP. OFF TRACK
	СРА	CPU ADDRESS CPU CHIP SELECT
	CPCS	CPU DATA
	CPDT	
	CPUADR	CPU ADDRESS LATCH
	CPUADT	CPU ADDRESS DATA BUS
	CPUIRQ	CPU INTERRUPT REQUEST CPU READ ENABLE
	CPRD	
	CPWR	CPU WRITE ENABLE
	CS	CHIPSELECT
	CSYNCIN	COMPOSITE SYNC OUT
	CSYNCOUT	COMPOSITE SYNC OUT

INIT	INITIAL/LOGO ABBREVIATIONS		
IINI	IAL/LOGO	ABBREVIATIONS	
D	DACCK	D/A CONVERTER CLOCK	
	DEEMP	DEEMPHASIS BIT ON/OFF	
	DEMPH	DEEMPHASIS SWITCHING	
	DIG0~UP	FL DIGIT OUTPUT	
	DIN	DATA INPUT	
	DMSRCK	DM SERIAL DATA READ	
	DMUTE	CLOCK	
	DO	DIGITAL MUTE CONTROL	
	DOUT0~UP	DROP OUT	
		DATAOUTPUT	
	DRF	DATA SLICE RF (BIAS)	
	DRPOUT	DROP OUT SIGNAL	
	DREQ	DATA REQUEST	
	DRESP	DATA RESPONSE	
	DSC	DIGITAL SERVO CONTROLLER	
	DSLF		
	DVD	DATA SLICE LOOP FILTER	
		DIGITAL VIDEO DISC	

IN	TIAL/LOGO	ABBREVIATIONS
Е	EC	ERROR TORQUE CONTROL
	ECR	ERROR TORQUE CONTROL
		REFERENCE
	ENCSEL	ENCODER SELECT
	ETMCLK	EXTERNAL M CLOCK (81MHz/
	ETSCLK	40.5MHz)
		EXTERNAL S CLOCK (54MHz)
F	FBAL	FOCUS BALANCE
	FCLK	FRAME CLOCK
	FE	FOCUS ERROR
	FFI	FOCUS ERROR AMP
	FEO	INVERTED INPUT
	FG	FOCUS ERROR AMP OUTPUT
	FSC	FREQUENCY GENERATOR
	FSCK	FREQUENCY SUB CARRIER
		FS (384 OVER SAMPLING)
		CLOCK
G	GND	COMMON GROUNDING
		(EARTH)
Н	HA0~UP	HOST ADDRESS
	HD0~UP	HOST DATA
	HINT	HOST INTERRUPT
	HRXW	HOST READ/WRITE

INIT	TAL/LOGO	ABBREVIATIONS
ı	IECOUT	IEC958 FORMAT DATA
	IPFRAG	ОИТРИТ
	IREF	INTERPOLATION FLAG
	ISEL	I (CURRENT) REFERENCE
		INTERFACE MODE SELECT
L	LDON	LASER DIODE CONTROL
	LPC	LASER POWER CONTROL
	LRCK	L CH/R CH DISTINCTION
		CLOCK
М	MA0~UP	MEMORY ADDRESS
	MCK	MEMORY CLOCK
	MCKI	MEMORY CLOCK INPUT
	MCLK	MEMORY SERIAL COMMAND
	MDATA	CLOCK
	MDQ0~UP	MEMORY SERIAL COMMAND
	MDQM	DATA
	MLD	MEMORY DATA INPUT/OUTPUT
	MPEG	
		MEMORY DATA I/O MASK
		MEMORYSERIAL COMMAND
		LOAD
		MOVING PICTURE EXPERTS
		GROUP
0	ODC	OPTICAL DISC CONTROLLER
	OFTR	OFF TRACKING
	OSCI	OSCILLATOR INPUT
	osco	OSCILLATOR OUTPUT
	OSD	ON SCREEN DISPLAY
P	P1~UP	PORT
	PCD	CD TRACKING PHASE
	PCK	DIFFERENCE
	PDVD	PLL CLOCK
	PEAK	DVD TRACKING PHASE
	PLLCLK /	DIFFERENCE
	PLLOK	CAP. FOR PEAK HOLD CHANNEL PLL CLOCK
	PWMCTL	PLL LOCK
	PWMDA B	
	PWWOA, B	PWM OUTPUT CONTROL PULSE WAVE MOTOR DRIVEA
		PULSE WAVE MOTOR OUT A,
	<u> </u>	ט

INIT	TAL/LOGO	ABBREVIATIONS
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE
	RS	OUTPUT
	RSEL	(CD-ROM) REGISTER SELECT
	RST	RF POLARITY SELECT
	RSV	RESET
		RESERVE
S	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK
	SCL	RECEIVER
	SCLK	SERIAL CLOCK
	SDA	SERIAL CLOCK
	SEG0~UP	SERIAL DATA
	SELCLK	FL SEGMENT OUTPUT
	SEN	SELECTCLOCK
	SIN1, 2	SERIAL PORT ENABLE
	SOUT1, 2	SERIAL DATA IN
	SPDI	SERIAL DATA OUT
	SPDO	SERIAL PORT DATA INPUT
	SPEN	SERIAL PORT DATA OUTPUT
	SPRCLK	SERIAL PORT R/W ENABLE
	SPWCLK	SERIAL PORT READ CLOCK
	SQCK	SERIAL PORT WRITE CLOCK
	SQCX	SUB CODE Q CLOCK
	SRDATA	SUBCODE Q DATA READ
	SRMADR	CLOCK
	SRMDT0~7	SERIAL DATA
		SRAM ADDRESS BUS
	SS	SRAM DATA BUS 0~7
	STAT	START/STOP
	STCLK	STATUS
	0.00	STREAM DATA CLOCK
	STENABLE	STREAM DATA
		STREAM DATA INPUT ENABLE
	STSEL	STREAM DATA POLARITY
	STVALID	SELECT
	SUBC	STREAM DATAVALIDITY
	SBCK	SUB CODE SERIAL
	SUBQ	SUB CODE CLOCK
	SYSCLK	SUB CODE Q DATA

	J. JJ	SYSTEM CLOCK
		STSTEW CLOCK
INIT	TAL/LOGO	ABBREVIATIONS
Т	TE	TRACKING ERROR
	TIBAL	BALANCE CONTROL
	TID	BALANCE OUTPUT 1
	TIN	BALANCE INPUT
	TIP	BALANCE INPUT
	TIS	BALANCE OUTPUT 2
	TPSN	OP AMP INPUT
	TPSO	OP AMP OUTPUT
	TPSP	OP AMP INVERTED INPUT
	TRCRS	TRACK CROSSSIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON

INIT	TIAL/LOGO	ABBREVIATIONS
٧	VBLANK	V BLANKING
	VCC	COLLECTOR POWER SUPPLY
		VOLTAGE
	VCDCONT	VIDEO CD CONTROL
		(TRACKING
	VDD	BALANCE)
	VFB	DRAIN POWER SUPPLY
	VREF	VOLTAGE
	vss	VIDEO FEED BACK
		VOLTAGE REFERENCE
		SOURCE POWER
		SUPPLYVOLTAGE
W	WAIT	BUS CYCLE WAIT
	WDCK	WORD CLOCK
	WEH	WRITE ENABLE HIGH
	WSR	WORD SELECT RECEIVER

INIT	TIAL/LOGO	ABBREVIATIONS
Х	X	X' TAL
	XALE	X ADDRESS LATCH ENABLE
	XAREQ	X AUDIO DATA REQUEST
	XCDROM	X CD ROM CHIP SELECT
	xcs	X CHIP SELECT
	XCSYNC	X COMPOSITE SYNC
	XDS	X DATA STROBE
	XHSYNCO	X HORIZONTAL SYNC OUTPUT
	XHINT	XH INTERRUPTREQUEST
	ΧI	X' TAL OSCILLATOR INPUT
	XINT	X INTERRUPT
	XMW	X MEMORY WRITE ENABLE
	хо	X' TAL OSCILLATOR OUTPUT
	XRE	X READ ENABLE
	XSRMCE	X SRAM CHIP ENABLE
	XSRMOE	X SRAM OUTPUT ENABLE
	XSRMWE	X SRAM WRITE ENABLE
	XVCS	X V-DEC CHIPSELECT
	XVDS	X V-DEC CONTROL BUS
	XVSYNCO	STROBE
		X VERTICAL SYNC OUTPUT

# 13. VOLTAGE CHART

#### Note:

 Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point, because it may differ from an actual measuring value due to difference of Measuring instrument and its measuringconditionand product itself.

13.1. MOTHER P.C.B.

**13.2. MODULE P.C.B.** 

# 14. BLOCK DIAGRAM

#### Note:

Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point, because it may differ from an actual measuring value due to difference of Measuring instrument and its measuringcondition and product itself.

- 14.1. OVERALL BLOCK DIAGRAM
- 14.2. POWER SUPPLY BLOCK DIAGRAM
- 14.3. SERVO BLOCK DIAGRAM
- 14.4. VIDEO BLOCK DIAGRAM
- 14.5. AUDIO BLOCK DIAGRAM

# 15. INTERCONNECTION SCHEMATIC DIAGRAM & SCHEMATIC DIAGRAM NOTES

### 15.1. INTERCONNECTION SCHEMATIC DIAGRAM

#### 15.2. SCHEMATIC DIAGRAM NOTES

This schematic diagram may be modified at any time with the development of new technology.

#### Important safety notice:

Components identified by A mark have special characteristics important for safety. Furthermore, special parts which have purpose of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacture's specified parts shownin theparts list.

#### Important safety notice:

There are special components used in this equipment which are important for safety.

These parts are marked by  $\triangle$  in the schematic diagrams. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original designwithout permission of manufacturer.

#### Caution!

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

Cover the parts boxes made of plastics with aluminum foil.

Ground the soldering iron.

Put a conductive mat on the work table.

Do not touch the legs of IC or LSI with the fingers directly.

## 16. SCHEMATIC DIAGRAM

16.1. POWER SUPPLY SECTION (MOTHER P.C.B. (1 / 2)) SCHEMATIC DIAGRAM

# 16.2. FRONT & AV OUT SECTION (MOTHER P.C.B. (2 / 2)) SCHEMATIC DIAGRAM

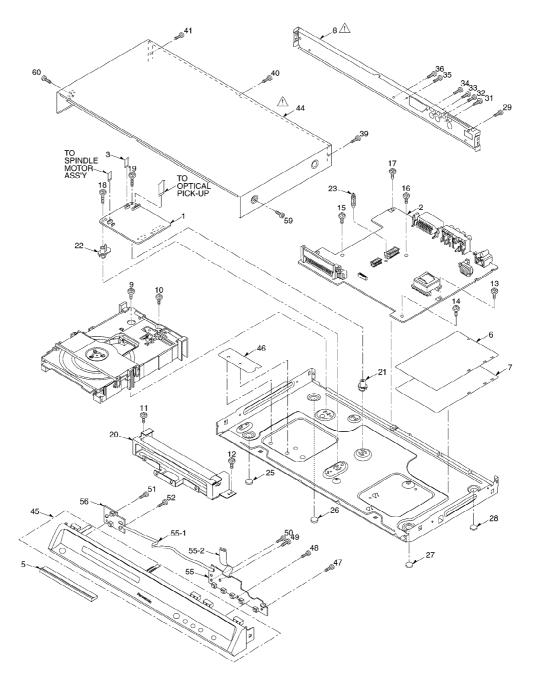
### 16.3. MODULE SCHEMATIC DIAGRAM

## 17. PRINT CIRCUIT BOARD

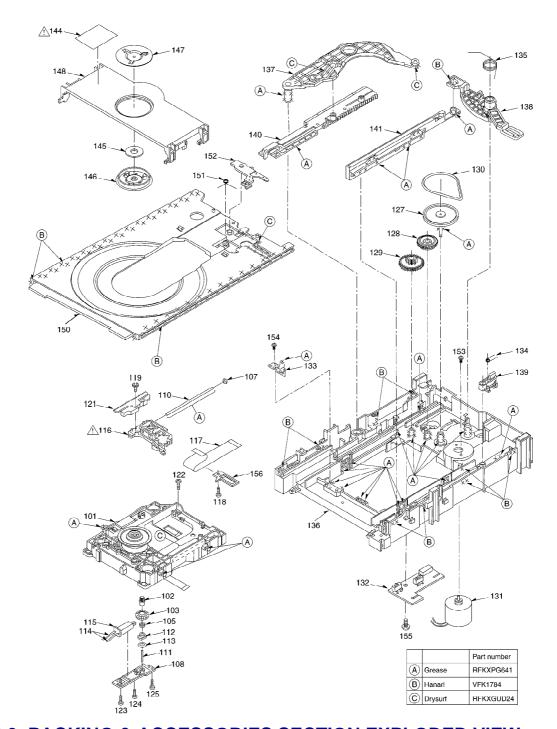
- 17.1. MOTHER P.C.B.
- 17.2. MOTHER P.C.B. ADDRESS INFORMATION
- 17.3. MODULE P.C.B. (1/2)
- 17.4. MODULE P.C.B. (2/2)
- 17.5. MODULE P.C.B. ADDRESS INFORMATION

## 18. EXPLODED VIEWS

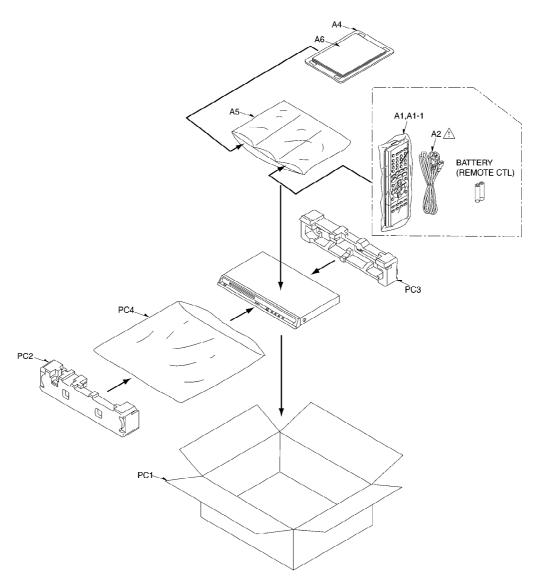
18.1. CASING PARTS & MECHANISM SECTION EXPLODED VIEW



**18.2. MECHANISM SECTION EXPLODED VIEW** 



18.3. PACKING & ACCESSORIES SECTION EXPLODED VIEW



# 19. REPLACEMENT PARTS LIST

#### Notes:

\*Important safety notice:

Components identified by A mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

\*Warning: This product uses a laser diode. Refer to caution statements.

\*Capacity values are in microfarads (  $\mu$  F) unless specified otherwise, P=Pico-farads (pF), F= Farads (F).

\*Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM).

\*The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

\*"(IA)-(IE)", marks in Remarks indicate languages of instruction manuals. [(IA): English, (IB): Polish, (IC): Spanish, (ID): Genman/French/Italian, (IE): Dutch/Swedish/Danish]

*All parts except parts mentioned [SPC] in the Remarks column are supplied by PAVCSG. *Parts mentioned [SPC] are supplied by PAVC-CSG.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	VEP76129AT	MODULE P.C.B.	1	(RTL)
<u>2</u>	VEP76126A	MOTHER P.C.B.	1	(RTL)
<u>3</u>	REZ1710	FFC(7P)	1	
<u>5</u>	RGKC0068-B	TRAY TOP	1	
<u>6</u>	RGQC0037	INSULATION SHEET	1	
<u>7</u>	RGQC0037	INSULATION SHEET	1	
<u>8</u>	RGRC0022B-A	REAR PANEL	1	⚠
<u>9</u>	RHD30101-1J	SCREW	1	
<u>10</u>	RHD30101-1J	SCREW	1	
<u>11</u>	RHD30111-3J	SCREW	1	
<u>12</u>	RHD30111-3J	SCREW	1	
<u>13</u>	RHD30111-3J	SCREW	1	
<u>14</u>	RHD30111-3J	SCREW	1	
<u>15</u>	RHD30111-3J	SCREW	1	
<u>16</u>	RHD30111-3J	SCREW	1	
<u>17</u>	RHD30111-3J	SCREW	1	
<u>18</u>	RHDC0023-J	SCREW	1	
<u>19</u>	RHDC0023-J	SCREW	1	
<u>20</u>	RGQC0038	FRONT ANGLE	1	
<u>21</u>	RMNC0016	PCB SUPPORT(A)	1	
<u>22</u>	RMNC0017	PCB SUPPORT(B)	1	
<u>23</u>	RMNC0019	PCB SUPPORT	1	
<u>25</u>	RKA0130-K	FOOT RUBBER	1	
<u>26</u>	RKA0130-K	FOOT RUBBER	1	
<u>27</u>	RKA0130-K	FOOT RUBBER	1	
<u>28</u>	RKA0130-K	FOOT RUBBER	1	
<u>29</u>	VHD0690-1	SCREW	1	
<u>31</u>	VHD0690-1	SCREW	1	
<u>32</u>	VHD0690-1	SCREW	1	
<u>33</u>	VHD0690-1	SCREW	1	
<u>34</u>	VHD0690-1	SCREW	1	
<u>35</u>	VHD0690-1	SCREW	1	
<u>36</u>	VHD0690-1	SCREW	1	
<u>39</u>	VHD0690-1	SCREW	1	
<u>40</u>	VHD0690-1	SCREW	1	
<u>41</u>	VHD0690-1	SCREW	1	
<u>44</u>	RKMC0012-S	TOP PANEL	1	(S) A
44	RKMC0012-K	TOP PANEL	1	(к) ≜
<u>45</u>	RFKGDVDS42AS	FRONT PANEL ASS'Y	1	(S)
45	RFKGDVDS42AK	FRONT PANEL ASS'Y	1	(K)
<u>46</u>	RGQC0054	DUSTPROOF SHEET	1	
<u>47</u>	RHD26046	SCREW	1	
<u>48</u>	RHD26046	SCREW	1	
<u>49</u>	RHD26046	SCREW	1	
<u>50</u>	RHD26046	SCREW	1	
<u>51</u>	RHD26046	SCREW	1	
<u>52</u>	RHD26046	SCREW	1	
<u>55</u>	VEP70131A	FRONT P.C.B.	1	(RTL)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
<u>55-1</u>	REZ1709	CABLE (3P)	1	
<u>55-2</u>	REZ1708	CABLE (5P)	1	
<u>56</u>	VEP70132A	SW P.C.B.	1	(RTL)
<u>59</u>	RHD30007-1SJ	SCREW	1	(S)
59	RHD30007-K2	SCREW	1	(K)
<u>60</u>	RHD30007-1SJ	SCREW	1	(S)
60	RHD30007-K2	SCREW	1	(K)
<u>101</u>	RXQ1327-1	SPINDLE MOTOR ASS'Y	1	
<u>102</u>	RDG0557	PINION SHAFT	1	
<u>103</u>	RDG0558	BEVEL GEAR	1	
<u>105</u>	RMB0713-1	THRUST SPRING	1	
<u>107</u>	RMG0617-H	CUSHION RUBBER(A)	1	
108	RMQ1112	MOTOR COVER	1	
<u>110</u>	RMS0788	GUIDE SHAFT	1	
<u>111</u>	RMS0798	GEAR SHAFT	1	
112	RMX0233	THRUST WASHER	1	
113	RMX0247	WASHER	1	
114	RWJ6702042	MOTOR CABLE	1	
<u>115</u>	RXQ0946	TRAVERSE MOTOR ASS'Y	1	
<u>116</u>	RAF3114A-CG	OPTICAL PICK-UP	1	Δ
117	REZ1686-1	FFC	1	
118	RHD14112-J	SCREW	1	
119	RHD17046-1	SCREW	1	
121	RMM0261	OPU DRIVE RACK	1	
122	VHD1224-1	SCREW	1	
123	VHD1224-1	SCREW	1	
124	VHD1224-1	SCREW	1	
125	VHD1224-1	SCREW	1	
127	RDG0597	PULLEY GEAR	1	
128	RDG0548	RELAY GEAR	1	
129	RDG0549	DRIVE GEAR	1	
130	RDV0070	BELT	1	
131	REM0132	LOADING MOTOR ASS'Y	1	
132	VEP70114A-1	MOTOR P.C.B.	1	(RTL)
133	RMC0387	SUPPORT SPRING	1	(KTL)
134	RME0351	LOCK LEVER SPRING	1	
	RMEC0350	CHANGE LEVER SPRING	1	
135 136	RMK0616-1	MECHA CHASSIS ASS'Y	1	
136 137	RML0680-1			
137	RML0628	DRIVE ARM CHANGE LEVER	1	
138			1	
139	RML0629	LOCK LEVER	1	
140	RMM0283	DRIVE RACK		
141	RMM0284	SUB RACK  LASER CAUTION LABEL	1	A.
144	RQLCA0141		1	Δ
145	JSMC0048	MAGNET	1	
146	RMR1685-X	CLAMPER	1	
147	RMA1890	MAGNET HOLDER	1	
148	RMR1686-K	CLAMP PLATE	1	
<u>150</u>	RGQ0417-K	TRAY	1	
<u>151</u>	RME0353-1	TRAY SLIDER SPRING	1	
<u>152</u>	RML0631	TRAY SLIDER	1	
<u>153</u>	XQN17+C25FJ	SCREW	1	
<u>154</u>	XTB26+6GFJ	SCREW	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
155	XTN2+6GFJ	SCREW	1	
156	RMQ1280	FFC HOLDER PIECE	1	
<u>A1</u>	EUR7631200R	REMOTE CONTROL ASS'Y	1	
<u>A1-1</u>	UR76EC3103A	BATTERY COVER	1	
<u>A2</u>	K2CQ2CA00006	AC CORD	1	⚠
<u>A4</u>	RPHC0096-1	PAD	1	
<u>A5</u>	RPFC0042	POLYETHYLENE BAG(F.B.)	1	
<u>A6</u>	RQT8509-1B	OPERATING INSTRUCTIONS	1	E (IA)
A6	RQT8510-1E	OPERATING INSTRUCTIONS	1	E (IB)
A6	RQT8511-1M	OPERATING INSTRUCTIONS	1	EG (IC)
A6	RQT8507-1D	OPERATING INSTRUCTIONS	1	EG (ID)
A6	RQT8508-1H	OPERATING INSTRUCTIONS	1	EG (IE)
C1001	F0CAF104A024	0.1U	1	⚠
C1002	F0CAF104A024	0.1U	1	Δ
C1003	ECKMNA471MBV	470P	1	<u> </u>
C1004	ECKMNA102MEV	1000P	1	Δ
C1011				1-1
	ECA2WHG100E	450V 10U	1	
C1012	ECA2WHG100E	450V 10U	1	
C1021 C1031	F1A3D221A010 F1B3A332A008	2000V 220P 1000V 0.0033U	1	
C1031	F1B3A332A008 F2A1H1010044		1	
C1041	ECQB1H152JF4	50V 100U	1	
C1051	ECQB1H1323F4	50V 0.0015U	1	
C1001	ECQB1H101KF4	50V 100P 50V 0.01U	1	
C1071	ECQB1H103JF4	50V 0.015U	1	
C1081	ECQB1H1323F4	50V 0.0013U	1	
C1092	F2A1H100A003	50V 10U	1	
C1101	ECQV1H684JL2	50V 0.68U	1	
C1102	ECQB1H104JF4	50V 0.1U	1	
C1110	F1H1H102A798	50V 1000P	1	
C1111	F2A1A681A539	10V 680U	1	
C1112	F2A1A102A206	10V 1000U	1	
C1115	ECJ1VF1C104Z	16V 0.1U	1	
C1116	F2A1A221A206	10V 220U	1	
C1117	F2A0J102A247	6.3V 1000U	1	
C1121	F2A0J681A550	6.3V 680U	1	
C1122	F2A0J222A247	6.3V 2200U	1	
C1141	F2A1E1010067	25V 100U	1	
C1151	F2A1E3310051	25V 330U	1	
C1153	F2A1E331A205	25V 330U	1	
C1154	F2A1C221A236	16V 220U	1	
C1155	ECJ1VB1E104K	25V 0.1U	1	
C1171	F2A1A1010072	10V 100U	1	
C1195	ECJ1VB1A105K	10V 1U	1	
C1196	ECJ1VB1H103K	50V 0.01U	1	
C1197	ECJ1VB1A105K	10V 1U	1	
C3502	F1H1H103A798	50V 0.01U	1	
C3503	ECJ1VB1C105K	16V 1U	1	
C3504	ECJ1VB1C105K	16V 1U	1	
C3505	F1H1C104A065	16V 0.1U	1	
C3506	F1H1H103A798	50V 0.01U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3507	F2A0J220A245	6.3V 22U	1	
C3508	ECJ1VB0J105K	6.3V 1U	1	
C3509	ECJ1VB0J105K	6.3V 1U	1	
C3510	ECJ1VB0J105K	6.3V 1U	1	
C3511	ECJ1VB0J105K	6.3V 1U	1	
C3512	F2A0J102A247	6.3V 1000U	1	
C3513	F2A0J102A247	6.3V 1000U	1	
C3514	F2A0J102A247	6.3V 1000U	1	
C3516	F2A0J102A247	6.3V 1000U	1	
C3518	F2A0J470A245	6.3V 47U	1	
C3804	F1H1H103A798	50V 0.01U	1	
C3805	F1H1H103A798	50V 0.01U	1	
C3806	F2A0J470A245	6.3V 47U	1	
C3811	F2A0J470A245	6.3V 47U	1	
C3812	ECJ1VB1C104K	16V 0.1U	1	
C3813	F1H1H103A798	50V 0.01U	1	
C3814	ECJ1VB1C105K	16V 1U	1	
C3815	ECJ1VB1C105K	16V 1U	1	
C3816	F2A0J220A245	6.3V 22U	1	
C3817	ECJ1VB1C105K	16V 1U	1	
C3818	ECJ1VB1C105K	16V 1U	1	
C3819	ECJ1VB1C105K	16V 1U	1	
C3851	ECJ1VC1H102J	50V 1000P	1	
C3852	ECJ1VC1H102J	50V 1000P	1	
C3871	F1H1H101A799	50V 100P	1	
C3872	F1H1H101A799	50V 100P	1	
C4291	F2A1A102A206	10V 1000U	1	
C4313	F1H1C104A090	16V 0.1U	1	
C4314	F1H1C104A090	16V 0.1U	1	
C4315	F1H1C104A090	16V 0.1U	1	
C4323	F2A1V221A082	35V 220U	1	
C4324	F2A1V221A082	35V 220U	1	
C4336	F1H1H820A799	50V 82P	1	
C4337	F1H1H820A799	50V 82P	1	
C4414	F2A1E470A205	25V 47U	1	
C4415	F2A1E470A205	25V 47U	1	
C4423	ECJ1VC1H102J	50V 1000P	1	
C4427	ECJ1VC1H102J	50V 1000P	1	
C4431	F1H1C104A090	16V 0.1U	1	
C4432	F1H1C104A065	16V 0.1U	1	
C4501	F1H1H102A798	50V 1000P	1	
C4502	F1H1C104A065	16V 0.1U	1	
C4591	F1H1C104A090	16V 0.1U	1	
C4703	F1H1C104A065	16V 0.1U	1	
C4751	F2A1E470A205	25V 47U	1	
C4752	F2A1E470A205	25V 47U	1	
C4781	F2A0J470A599	6.3V 47U	1	
C6001	F2A0J101A245	6.3V 100U	1	
C6002	F1H1C104A065	16V 0.1U	1	
C6003	F1H1H103A798	50V 0.01U	1	
C6005	F2A1H100A236	50V 10U	1	
C6006	F1H1H103A798	50V 0.01U	1	
C6020	ECJ1VB1E104K	25V 0.1U	1	
C6040	ECJ1VF1H103Z	50V 0.01U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C6050	ECJ1VF1H103Z	50V 0.01U	1	
C6060	ECJ1VF1H103Z	50V 0.01U	1	
C6081	F1H1H103A798	50V 0.01U	1	
C6132	F1H1C104A065	16V 0.1U	1	
C8001	F2G0G331A012	4V 330U	1	
C8003	F1G1C104A042	16V 0.1U	1	
C8004	F1G1C104A042	16V 0.1U	1	
C8005	F1G1C104A042	16V 0.1U	1	
C8006	F1G1C104A042	16V 0.1U	1	
C8007	F1G1C104A042	16V 0.1U	1	
C8008	F1G1C104A042	16V 0.1U	1	
C8011	F2G0J101A066	6.3V 100U	1	
C8011	F1G1C104A042	16V 0.1U	1	
C8013	F1G1C104A042	16V 0.1U	1	
C8014	F1G1C104A042	16V 0.1U	1	
C8015	F1G1C104A042	16V 0.1U	1	
C8016	F1G1C104A042	16V 0.1U	1	
C8017	F1G1C104A042	16V 0.1U	1	
C8018	F1G1C104A042	16V 0.1U	1	
C8019	F1G1C104A042	16V 0.1U	1	
C8020	F1G1C104A042	16V 0.1U	1	
C8021	F1G1C104A042	16V 0.1U	1	
C8022	F1G1C104A042	16V 0.1U	1	
C8023	F1G1C104A042	16V 0.1U	1	
C8024	F1G1C104A042	16V 0.1U	1	
C8025	F1G1C104A042	16V 0.1U	1	
C8026	F1G1C104A042	16V 0.1U	1	
C8051	ECJ1VB0J105K	6.3V 1U	1	
C8052	F1G1A104A014	10V 0.1U	1	
C8053	F1G1C104A042	16V 0.1U	1	
C8054	ECJ0EC1H221J	50V 220P	1	
C8055	ECJ1VB0J105K	6.3V 1U	1	
C8056	ECJ0EB1E222K	25V 2200P	1	
C8057	ECJ1VB0J105K	6.3V 1U	1	
C8111	F1G1A104A014	10V 0.1U	1	
C8112	ECJ1VB0J105K	6.3V 1U	1	
C8113	ECJ0EB1E471K	25V 470P	1	
C8151	ECJ2FB0J106K	6.3V 10U	1	
C8152	ECJ1VB1C105K	16V 1U	1	
C8201	F2G0J101A066	6.3V 100U	1	
C8202	F1G1A104A014	10V 0.1U	1	
C8202	F1G1A104A014	10V 0.1U	1	
			1	
C8211	ECJ0EB1E122K	25V 1200P		
C8221	ECJ0EB1E102K	25V 1000P	1	
C8222	F1G1E821A056	25V 820P	1	
C8225	ECJ0EB1E102K	25V 1000P	1	
C8226	ECJ0EB1E102K	25V 1000P	1	
C8231	F1G1A104A014	10V 0.1U	1	
C8232	F1G1A104A014	10V 0.1U	1	
C8251	F2G0J221A065	6.3V 220U	1	
C8252	F1G1C104A042	16V 0.1U	1	
C8253	F1G1A104A014	10V 0.1U	1	
C8255	F2G1C470A076	16V 47U	1	
C8256	F1G1C104A042	16V 0.1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C8257	F1G1C104A042	16V 0.1U	1	
C8258	F1G1A104A014	10V 0.1U	1	
C8261	F1G1C104A042	16V 0.1U	1	
C8301	F2G0J221A031	6.3V 220U	1	
C8302	F2G0J330A031	6.3V 220U	1	
C8303	F1G1A104A014	10V 0.1U	1	
C8304	F1G1A104A014	10V 0.1U	1	
C8305	F1G1A104A014	10V 0.1U	1	
C8306	F1G1A104A014	10V 0.1U	1	
C8311	F1G1A104A014	10V 0.1U	1	
C8312	ECJ1VB0J105K	6.3V 1U	1	
C8313	ECJ1VB0J105K	6.3V 1U	1	
C8401	ECJ0EC1H150J	50V 15P	1	
			1	
C8421	F2G0J101A083	6.3V 100U		
C8422	F1G1C104A042	16V 0.1U	1	
C8423	F2G0J330A083	6.3V 33U	1	
C8424	F1G1C104A042	16V 0.1U	1	
C8428	F1G1C104A042	16V 0.1U	1	
C8501	F2G0J101A031	6.3V 100U	1	
C8502	F1G1C104A042	16V 0.1U	1	
C8503	F1G1C104A042	16V 0.1U	1	
C8504	F1G1C104A042	16V 0.1U	1	
C8505	F1G1C104A042	16V 0.1U	1	
C8511	ECJ1VB0J105K	6.3V 1U	1	
C8512	ECJ1VB0J105K	6.3V 1U	1	
C8513	F1G1A104A014	10V 0.1U	1	
C8514	F1G1A104A014	10V 0.1U	1	
C8515	F1G1A104A014	10V 0.1U	1	
C8516	F1G1A104A014	10V 0.1U	1	
C8521	F1G1A104A014	10V 0.1U	1	
C8522	F1G1A104A014	10V 0.1U	1	
C8523	F1G1C104A042	16V 0.1U	1	
C8524	F1G1C104A042	16V 0.1U	1	
C8525	ECJ0EB1C562K	16V 5600P	1	
C8526	F1G1C183A004	16V 0.018U	1	
C8527	F1G1C333A004	16V 0.033U	1	
C8528	ECJ1VB0J105K	6.3V 1U	1	
C8529	ECJ1VB0J105K	6.3V 1U	1	
C8530	F1G1C104A042	16V 0.1U	1	
C8531	F1G1H1010005	50V 100P	1	
C8532	ECJ0EC1H221J	50V 220P	1	
C8533	F1G1C104A042	16V 0.1U	1	
C8536	F1G1A104A014	10V 0.1U	1	
C8537	F1G1A104A014	10V 0.1U	1	
C8541	ECJ0EB1E472K	25V 4700P	1	
C8550	F2G0J330A031	6.3V 33U	1	
C8551	F1G1C104A042	16V 0.1U	1	
C8552	F2G1C100A072	16V 10U	1	
C8552		6.3V 47U	1	
	F2G0J470A031			
C8554	ECJ1VB0J105K	6.3V 1U	1	
C8561	F1G1C104A042	16V 0.1U	1	
C8562	F2G1C100A072	16V 10U	1	
C8563	F2G0J470A031	6.3V 47U	1	
C8564	ECJ1VB0J105K	6.3V 1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C8571	F1K1A1060017	10V 10U	1	
C8572	F1G1C104A042	16V 0.1U	1	
C8601	F1G1C104A042	16V 0.1U	1	
C8602	ECJ0EB1C153K	16V 0.015U	1	
C8606	F1G1C104A042	16V 0.1U	1	
C8611	F1G1C104A042	16V 0.1U	1	
	_		1	
C8621	ECJ0EC1H180J	50V 18P		
C8622	F1G1H180A452	50V 18P	1	
C8651	F1G1C104A042	16V 0.1U	1	
C8652	F1G1C104A042	16V 0.1U	1	
D1011	B0EDKT000009	DIODE	1	
D1011	B0HADV000001	DIODE	1	
D1031	B0HAGM000006	DIODE	1	
			1	
D1051	MAZ40910HF	DIODE		
D1061	MA2C16500E	DIODE	1	
D1071	MAZ41000MF	DIODE	1	
D1072	MA2C16500E	DIODE	1	
D1081	MAZ40910HF	DIODE	1	
D1082	MA2C16500E	DIODE	1	
D1111	B0JAMG000013	DIODE	1	
D1121	B0JAMG000013	DIODE	1	
D1122	B0EAKM000117	DIODE	1	
D1141	B0JAMK000023	DIODE	1	
D1151	B0JAMK000023	DIODE	1	
D1152	B0JAMK000023	DIODE	1	
D1153	B0EAKM000122	DIODE	1	
D1171	B0JAME000037	DIODE	1	
D3821	MA3X152A0L	DIODE	1	
D4301	MAZ40560HF	DIODE	1	
D6081	MAZ40910LF	ZENER DIODE	1	
D6101	LNJ201LPQJA	LED	1	
D8211	MA2J11100L	DIODE	1	
D8571	MA2J72800L	DIODE	1	
DP6081	A2BA00000229	FL DISPLAY	1	
	1/25 / 225 /			Δ
F1001	K5D162BLA013	FUSE	1	<u>A</u>
FP2601	K1MN07B00009	7PIN JACK	1	
FP3501	K1KA14A00135	CONNECTOR(MALE) 14P	1	
FP3501	K1KA14A00135	CONNECTOR(MALE) 14P	1	
		• • • •	1	
FP8251	K1MN06AA0076	JACK		
FP8252	K1MN07AA0076	JACK	1	
FP8531	K1MN26AA0041	JACK	1	
IC1021	C0DACZH00033	IC	1	
IC1101	C0DAEMB00003	IC	1	
IC1151	C0DBZHG00047	IC	1	
IC1195	CODBFGC00008	IC	1	
IC3501	C9ZB00000498	IC	1	
IC3501	+	IC	1	
	C1AB00001935	IC IC		
IC3802	C1AB00001731		1	
IC3811	C9ZB00000461	IC	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC4301	C0ABBB000230	IC	1	
IC6001	MN101C87AAG	IC	1	
IC8001	MN2DS0009VP	IC	1	
IC8051	C3ABPG000133	IC	1	
IC8111	C0CBCBD00018	IC	1	
IC8151	C0DBEYY00016	IC	1	
IC8251	C0GBG0000054	IC	1	
IC8420	C0FBBK000049	IC	1	
IC8601	C0EBA0000029	IC	1	
IC8606		IC	1	
	C0EBE0000455			
IC8611	RFKWDVD\$42A	IC	1	ropor
IC8651	RFKWSSA0B160	IC	1	[SPC]
ID2002	VELIE04 70000E	IC PROTECTOR	4	
IP3802	K5H501Z00005	IC PROTECTOR	1	
IP4751	K5H252Z00003	IC PROTECTOR	1	
ID6124	P3P A D0000115	DEMOTE DECEIVING SENSOR	4	
IR6131	B3RAD0000115	REMOTE RECEIVING SENSOR	1	
JK3871	K1FB121B0016	JACK, AV	1	
JK4401	K2YZ07000005	JACK, AUDIO VIDEO OUT	1	
0114401	142120100000	57.61.1, 7.62.16 TI226 GG1		
K3505	ERJ3GEY0R00V	1/10W 0	1	
K3810	ERJ3GEY0R00V	1/10W 0	1	
K3811	ERJ3GEY0R00V	1/10W 0	1	
K3813	ERJ3GEY0R00V	1/10W 0	1	
K3872	ERJ3GEY0R00V	1/10W 0	1	
K6001	ERJ3GEY0R00V	1/10W 0	1	
K6008	ERJ3GEY0R00V	1/10W 0	1	
K8101	ERJ3GEY0R00V	1/10W 0	1	
K8102	ERJ3GEY0R00V	1/10W 0	1	
K8103	ERJ3GEY0R00V	1/10W 0	1	
K8104	ERJ6GEY0R00V	1/10W 0	1	
K8105	ERJ3GEY0R00V	1/10W 0	1	
K8251			1	
	ERJ3GEY0R00V ERJ2GE0R00X	1/10W 0		
K8261		1/16W 0	1	
K8321	ERJ2GE0R00X	1/16W 0	1	
K8325	ERJ2GE0R00X	1/16W 0	1	
K8331	ERJ2GE0R00X	1/16W 0	1	
K8335	ERJ2GE0R00X	1/16W 0	1	
K8341	ERJ2GE0R00X	1/16W 0	1	
K8421	ERJ3GEY0R00V	1/10W 0	1	
14004	EL E4ENIOOC A	NOISE EILTED		Δ
L1001	ELF15N003A	NOISE FILTER	1	Δ
L1111	G0A100HA0023	COIL 10UH	1	
L1117	G0C100JA0048	COIL 10UH	1	
L1131	G0C330KA0065	COIL 33UH	1	
L1141	G0C330KA0065	COIL 33UH	1	
L1151	G0A220GA0026	COIL 22UH	1	
L3501	G0C220JA0019	COIL 22UH	1	
L3502	G0C220JA0019	COIL 22UH	1	
L4291	G0C220KA0065	COIL 22UH	1	
L6001	G0C101JA0019	COIL 100UH	1	
L8201	G1C100K00019	CHIP INDUCTOR	1	
L8301	G1C100K00019	CHIP INDUCTOR	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
L8302	G1C100K00019	CHIP INDUCTOR	1	
L8501	G1C100K00019	CHIP INDUCTOR	1	
L8550	G1C100KA0055	CHIP INDUCTOR 10UH	1	
LB3533	J0JBC0000015	COIL	1	
LB3534	J0JCC0000186	COIL	1	
LB3535	J0JBC0000015	COIL	1	
LB3536	J0JBC0000015	COIL	1	
LB3871	J0JBC0000015	COIL	1	
LB3872	J0JBC0000015	COIL	1	
LB3873	J0JBC0000015	COIL	1	
LB3874	J0JBC0000015	COIL	1	
LB8001	J0JHC0000097	COIL	1	
LB8011	J0JHC0000097	COIL	1	
LB8255	ERJ3GEY0R00V	1/10W 0	1	
LB8256	ERJ3GEY0R00V	1/10W 0	1	
LB8257	ERJ3GEY0R00V	1/10W 0	1	
LB8258	ERJ3GEY0R00V	1/10W 0	1	
LB8259	ERJ3GEY0R00V	1/10W 0	1	
LB8260	ERJ3GEY0R00V	1/10W 0	1	
LB8261	ERJ2GE0R00X	1/16W 0	1	
LB8262	ERJ2GE0R00X	1/16W 0	1	
LB8301	J0JBC0000042	COIL	1	
LB8302	J0JBC0000042	COIL	1	
LB8303	J0JBC0000042	COIL	1	
LB8304	J0JBC0000042	COIL	1	
LB8305	J0JBC0000042	COIL	1	
LB8401	J0JBC0000042	COIL	1	
LB8421	ERJ2GE0R00X	1/16W 0	1	
LB8422	ERJ2GE0R00X	1/16W 0	1	
LB8423	ERJ2GE0R00X	1/16W 0	1	
LB8424	ERJ2GE0R00X	1/16W 0	1	
LB8491	ERJ2GE0R00X	1/16W 0	1	
LB8530	J0JHC0000097	COIL	1	
LB8531	ERJ2GE0R00X	1/16W 0	1	
LB8551	J0JBC0000042	COIL	1	
LB8561		COIL	1	
LB8571	J0JBC0000042 J0JBC0000042	COIL	1	
LB8691	ERJ2GEJ101X		1	
LB8692	ERJ2GEJ101X	1/16W 100	1	
		1/16W 100	1	
LB8693	ERJ2GEJ101X	1/16W 100	'	
D1001	K2AA2B000011	AC JACK	1	<u> </u>
P1001	NZAAZDUUUU11	AC JACK	1	1 7=7
DC4	BBCC0404	DACKING CASE		(E) F.C
PC1	RPGC0401	PACKING CASE	1	(S) EG
PC1	RPGC0402	PACKING CASE	1	(K) EG
PC1	RPGC0403	PACKING CASE	1	(S) E
PC1	RPGC0404	PACKING CASE	1	(K) E
PC2	RPNC0110A-1	CUSHION(A)	1	
PC3	RPNC0110B-1	CUSHION(B)	1	
PC4	RPFC0026-B	POLYETHYLENE BAG	1	
		1		
PJ6101	K1MP05A00004	JACK	1	1

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
PS8101	K1KB14A00074	CONNECTOR(14P)	1	
PS8301	K1KB20A00165	CONNECTOR(20P)	1	
Q1051	B3PBA0000241	TRANSISTOR	1	⚠
Q1115	B1DHDD000029	TRANSISTOR	1	
Q3801	B1ABDF000033	TRANSISTOR	1	
Q3821	XN0460100L	TRANSISTOR	1	
Q3851	B1ABDF000033	TRANSISTOR	1	
Q3852	B1ABDF000033	TRANSISTOR	1	
Q4302	B1ABDF000033	TRANSISTOR	1	
Q4422	B1ABDF000033	TRANSISTOR	1	
Q4423	B1ABDF000033	TRANSISTOR	1	
Q4751	B1ABDF000033	TRANSISTOR	1	
Q6085	B1ABGC000011	TRANSISTOR	1	
Q8551	B1ABDF000018	TRANSISTOR	1	
Q8552	B1ADGB000008	TRANSISTOR	1	
Q8561	B1ABDF000018	TRANSISTOR	1	
Q8562	B1ADGB000008	TRANSISTOR	1	
QR1115	B1GBCFNN0043	TRANSISTOR	1	
QR3501	B1GBCFLL0043	TRANSISTOR	1	
QR3502	B1GBCFLL0043	TRANSISTOR	1	
QR3821	B1GBCFLL0043	TRANSISTOR	1	
QR3822	B1GBCFLL0043	TRANSISTOR	1	
QR3823	B1GDCFJJ0041	TRANSISTOR	1	
QR4302	B1GDCFEJ0008	TRANSISTOR	1	
QR4306	B1GBCFJA0017	TRANSISTOR	1	
QR8111	XP0621400L	TRANSISTOR	1	
QR8420	B1GBCFJJ0040	TRANSISTOR	1	
QR8571	B1GDCFEC0001	TRANSISTOR	1	
R1001	ERDS2FJ474T	1/4W 470K	1	
R1002	ERDS2FJ474T	1/4W 470K	1	
R1031	ERG2SJ683P	2W 68K	1	
R1041	ERX12SJ4R7E	1/2W 4.7	1	
R1051	EROS2THF2002	1/4W 20K	1	
R1061	EROS2THF1801	1/4W 1.8K	1	
R1062	ERDS2TJ183T	1/4W 18K	1	
R1071	EROS2THF4301	1/4W 4.3K	1	
R1081	EROS2THF3301	1/4W 3.3K	1	
R1083	EROS2THF2702	1/4W 27K	1	
R1084	EROS2THF3301	1/4W 3.3K	1	
R1101	ERDS2TJ181T	1/4W 180	1	
R1102	EROS2THF4701	1/4W 4.7K	1	
R1103	EROS2THF4701	1/4W 4.7K	1	
R1104	ERJ6GEYJ102V	1/10W 1K	1	
R1105	ERJ3GEYJ222V	1/10W 2.2K	1	
R1106	ERJ3GEYJ102V	1/10W 1K	1	
R1107	ERJ3GEYJ103V	1/10W 10K	1	
R1115	ERJ3GEYJ104V	1/10W 100K	1	
R1116	ERJ3GEYJ102V	1/10W 1K	1	
R1191	ERJ3GEYJ104V	1/10W 100K	1	
R3501	ERJ3GEYJ223V	1/10W 22K	1	
R3521	ERJ3GEYJ223V	1/10W 22K	1	

R3533 ERJ3GEYF750V 1/10W 75 1 R3534 ERJ3GEYF750V 1/10W 75 1 R3535 ERJ3GEYJ750V 1/10W 75 1 R3536 ERJ3GEYJ750V 1/10W 75 1 R3821 ERJ3GEYJ223V 1/10W 22K 1 R3822 ERJ3GEYJ223V 1/10W 22K 1 R3823 ERJ3GEYJ472V 1/10W 4.7K 1 R3824 ERJ3GEYJ223V 1/10W 22K 1 R3825 ERJ3GEYJ472V 1/10W 4.7K 1 R3826 ERJ3GEYJ472V 1/10W 4.7K 1 R3827 ERJ3GEYJ472V 1/10W 4.7K 1 R3828 ERJ3GEYJ471V 1/10W 4.7K 1 R3829 ERJ3GEYJ471V 1/10W 4.7W 1 R3821 ERJ3GEYJ471V 1/10W 4.7W 1 R3822 ERJ3GEYJ471V 1/10W 4.7W 1 R3823 ERJ3GEYJ471V 1/10W 4.7W 1 R3824 ERJ3GEYJ471V 1/10W 4.7W 1 R3825 ERJ3GEYJ471V 1/10W 4.7W 1 R3826 ERJ3GEYJ471V 1/10W 4.7W 1 R3827 ERJ3GEYJ681V 1/10W 4.7W 1 R3851 ERJ3GEYJ681V 1/10W 4.7W 1 R3852 ERJ3GEYJ681V 1/10W 4.7W 1 R3853 ERJ3GEYJ681V 1/10W 4.7W 1 R3854 ERJ3GEYJ681V 1/10W 4.7W 1 R3855 ERJ3GEYJ681V 1/10W 4.7W 1 R3856 ERJ3GEYJ681V 1/10W 4.7W 1 R3857 ERJ3GEYF750V 1/10W 75 1 R3877 ERJ3GEYF750V 1/10W 75 1 R3877 ERJ3GEYF750V 1/10W 75 1	
R3535 ERJ3GEYJ750V 1/10W 75 1 R3536 ERJ3GEYJ750V 1/10W 75 1 R3821 ERJ3GEYJ223V 1/10W 22K 1 R3822 ERJ3GEYJ223V 1/10W 22K 1 R3823 ERJ3GEYJ472V 1/10W 4.7K 1 R3824 ERJ3GEYJ223V 1/10W 22K 1 R3825 ERJ3GEYJ472V 1/10W 4.7K 1 R3826 ERJ3GEYJ472V 1/10W 4.7K 1 R3827 ERJ3GEYJ472V 1/10W 18K 1 R3827 ERJ3GEYJ223V 1/10W 22K 1 R3828 ERJ3GEYJ471V 1/10W 470 1 R3851 ERJ3GEYJ681V 1/10W 680 1 R3852 ERJ3GEYJ821V 1/10W 820 1 R3853 ERJ3GEYJ821V 1/10W 820 1 R3854 ERJ3GEYJ821V 1/10W 820 1 R3857 ERJ3GEYJ821V 1/10W 820 1 R3878 ERJ3GEYJ681V 1/10W 680 1 R3879 ERJ3GEYF750V 1/10W 75 1 R3871 ERJ3GEYF750V 1/10W 75 1 R3873 ERJ3GEYF750V 1/10W 75 1 R3874 ERJ3GEYF750V 1/10W 75 1	
R3536 ERJ3GEYJ750V 1/10W 75 1 R3821 ERJ3GEYJ223V 1/10W 22K 1 R3822 ERJ3GEYJ223V 1/10W 22K 1 R3823 ERJ3GEYJ472V 1/10W 4.7K 1 R3824 ERJ3GEYJ223V 1/10W 22K 1 R3825 ERJ3GEYJ472V 1/10W 4.7K 1 R3826 ERJ3GEYJ472V 1/10W 4.7K 1 R3827 ERJ3GEYJ472V 1/10W 18K 1 R3827 ERJ3GEYJ23V 1/10W 22K 1 R3828 ERJ3GEYJ471V 1/10W 22K 1 R3851 ERJ3GEYJ681V 1/10W 680 1 R3852 ERJ3GEYJ821V 1/10W 820 1 R3853 ERJ3GEYJ821V 1/10W 820 1 R3854 ERJ3GEYJ821V 1/10W 820 1 R3875 ERJ3GEYJ681V 1/10W 680 1 R3871 ERJ3GEYF750V 1/10W 75 1 R3872 ERJ3GEYF750V 1/10W 75 1 R3873 ERJ3GEYF750V 1/10W 75 1 R3874 ERJ3GEYF750V 1/10W 75 1	
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R3824 ERJ3GEYJ223V 1/10W 22K 1 R3825 ERJ3GEYJ472V 1/10W 4.7K 1 R3826 ERJ3GEYJ183V 1/10W 18K 1 R3827 ERJ3GEYJ223V 1/10W 22K 1 R3828 ERJ3GEYJ471V 1/10W 470 1 R3851 ERJ3GEYJ681V 1/10W 680 1 R3852 ERJ3GEYJ821V 1/10W 820 1 R3853 ERJ3GEYJ821V 1/10W 820 1 R3854 ERJ3GEYJ881V 1/10W 820 1 R3857 ERJ3GEYF750V 1/10W 75 1 R3871 ERJ3GEYF750V 1/10W 75 1 R3873 ERJ3GEYF750V 1/10W 75 1 R3874 ERJ3GEYF750V 1/10W 75 1 R3874 ERJ3GEYF750V 1/10W 75 1	
R3825 ERJ3GEYJ472V 1/10W 4.7K 1 R3826 ERJ3GEYJ183V 1/10W 18K 1 R3827 ERJ3GEYJ223V 1/10W 22K 1 R3828 ERJ3GEYJ471V 1/10W 470 1 R3851 ERJ3GEYJ681V 1/10W 680 1 R3852 ERJ3GEYJ821V 1/10W 820 1 R3853 ERJ3GEYJ821V 1/10W 820 1 R3854 ERJ3GEYJ881V 1/10W 680 1 R3875 ERJ3GEYF750V 1/10W 75 1 R3877 ERJ3GEYF750V 1/10W 75 1 R3878 ERJ3GEYF750V 1/10W 75 1 R3879 ERJ3GEYF750V 1/10W 75 1 R3871 ERJ3GEYF750V 1/10W 75 1 R3873 ERJ3GEYF750V 1/10W 75 1	
R3826 ERJ3GEYJ183V 1/10W 18K 1 R3827 ERJ3GEYJ223V 1/10W 22K 1 R3828 ERJ3GEYJ471V 1/10W 470 1 R3851 ERJ3GEYJ681V 1/10W 680 1 R3852 ERJ3GEYJ821V 1/10W 820 1 R3853 ERJ3GEYJ821V 1/10W 820 1 R3854 ERJ3GEYJ681V 1/10W 680 1 R3871 ERJ3GEYF750V 1/10W 75 1 R3872 ERJ3GEYF750V 1/10W 75 1 R3873 ERJ3GEYF750V 1/10W 75 1 R3874 ERJ3GEYF750V 1/10W 75 1	
R3827       ERJ3GEYJ223V       1/10W 22K       1         R3828       ERJ3GEYJ471V       1/10W 470       1         R3851       ERJ3GEYJ681V       1/10W 680       1         R3852       ERJ3GEYJ821V       1/10W 820       1         R3853       ERJ3GEYJ821V       1/10W 820       1         R3854       ERJ3GEYJ681V       1/10W 680       1         R3871       ERJ3GEYF750V       1/10W 75       1         R3872       ERJ3GEYF750V       1/10W 75       1         R3873       ERJ3GEYF750V       1/10W 75       1         R3874       ERJ3GEYF750V       1/10W 75       1	
R3828 ERJ3GEYJ471V 1/10W 470 1 R3851 ERJ3GEYJ681V 1/10W 680 1 R3852 ERJ3GEYJ821V 1/10W 820 1 R3853 ERJ3GEYJ821V 1/10W 820 1 R3854 ERJ3GEYJ681V 1/10W 680 1 R3871 ERJ3GEYF750V 1/10W 75 1 R3872 ERJ3GEYF750V 1/10W 75 1 R3873 ERJ3GEYF750V 1/10W 75 1 R3874 ERJ3GEYF750V 1/10W 75 1	
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R3871 ERJ3GEYF750V 1/10W 75 1 R3872 ERJ3GEYF750V 1/10W 75 1 R3873 ERJ3GEYF750V 1/10W 75 1 R3874 ERJ3GEYF750V 1/10W 75 1	
R3872 ERJ3GEYF750V 1/10W 75 1 R3873 ERJ3GEYF750V 1/10W 75 1 R3874 ERJ3GEYF750V 1/10W 75 1	
R3873 ERJ3GEYF750V 1/10W 75 1 R3874 ERJ3GEYF750V 1/10W 75 1	
R3874 ERJ3GEYF750V 1/10W 75 1	
R3875 ERJ3GEYJ221V 1/10W 220 1	
R3876 ERJ3GEYJ221V 1/10W 220 1	
R3877 ERJ3GEYJ750V 1/10W 75 1	
R3878 ERJ3GEYJ750V 1/10W 75 1	
R4301 ERJ3GEYJ271V 1/10W 270 1	
R4302 ERJ3GEYJ103V 1/10W 10K 1	
R4304 ERJ3GEYJ222V 1/10W 2.2K 1	
R4309 ERJ3GEYJ223V 1/10W 22K 1	
R4320 ERJ3GEYJ222V 1/10W 2.2K 1	
R4331 D0HB912ZA002 1/10W 9.1K 1	
R4332 D0HB912ZA002 1/10W 9.1K 1	
R4355 D0HB153ZA002 1/10W 15K 1	
R4356 D0HB153ZA002 1/10W 15K 1	
R4422 ERJ3GEYJ473V 1/10W 47K 1	
R4423 ERJ3GEYJ473V 1/10W 47K 1	
R4428 ERJ3GEYJ681V 1/10W 680 1	
R4429 ERJ3GEYJ681V 1/10W 680 1	
R4451 ERJ3GEYJ821V 1/10W 820 1	
R4452 ERJ3GEYJ821V 1/10W 820 1	
R4460 ERJ3GEYJ221V 1/10W 220 1	
R4751 ERJ3GEYJ102V 1/10W 1K 1	
R4752 ERJ3GEYJ102V 1/10W 1K 1	
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R4754 ERJ3GEYJ221V 1/10W 220 1	
R4755 ERJ3GEYJ750V 1/10W 75 1	
R4756 ERJ3GEYJ103V 1/10W 10K 1	
R6004 ERJ3GEYJ103V 1/10W 10K 1	
R6006 ERJ3GEYJ103V 1/10W 10K 1	
R6009 ERJ3GEYJ103V 1/10W 10K 1	
R6011 ERJ3GEYJ103V 1/10W 10K 1	
R6012 ERJ3GEYJ103V 1/10W 10K 1	
R6021 ERJ3GEYJ103V 1/10W 10K 1	
R6022 ERJ3GEY0R00V 1/10W 0 1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6023	ERJ3GEYJ103V	1/10W 10K	1	
R6024	ERJ3GEYJ122V	1/10W 1.2K	1	
R6025	ERJ3GEYJ103V	1/10W 10K	1	
R6026	ERJ3GEY0R00V	1/10W 0	1	
R6040	ERJ3GEYJ103V	1/10W 10K	1	
R6050	ERJ3GEYJ103V	1/10W 10K	1	
R6060	ERJ3GEYJ103V	1/10W 10K	1	
R6061	ERJ3GEYJ104V	1/10W 100K	1	
R6066	ERJ3GEYJ104V	1/10W 100K	1	
R6071	ERJ3GEYJ303V	1/10W 30K	1	
R6072	ERJ3GEYJ473V	1/10W 47K	1	
R6081	ERQ14AJW181E	1/4W 180	1	
R6085	ERJ3GEYJ822V	1/10W 47K	1	
R6086	ERJ3GEYJ104V	1/10W 47K	1	
R6090	ERJ3GEYJ473V	1/10W 47K	1	
R6091	ERJ3GEYJ473V	1/10W 47K	1	
R6092	ERJ3GEYJ473V	1/10W 47K	1	
R6093	ERJ3GEYJ473V	1/10W 47K	1	
R6094	ERJ3GEYJ473V	1/10W 47K	1	
R6095	ERJ3GEYJ473V	1/10W 47K	1	
R6096	ERJ3GEYJ473V	1/10W 47K	1	
R6097	ERJ3GEYJ473V	1/10W 47K	1	
R6098	ERJ3GEYJ473V	1/10W 47K	1	
			1	
R6099	ERJ3GEYJ473V	1/10W 47K	1	
R6101	ERJ3GEYJ151V	1/10W 150		
R6151	ERJ3GEYJ122V	1/10W 1.2K	1	
R6161	ERJ3GEYJ122V	1/10W 1.2K	1	
R6171	ERJ3GEYJ122V	1/10W 1.2K	1	
R6202	ERJ3GEYJ101V	1/10W 100		
R6204	ERJ3GEYJ104V	1/10W 100K	1	
R8002	ERJ2GEJ473X	1/16W 47K	1	
R8003	ERJ2GEJ473X	1/16W 47K	1	
R8004	ERJ2GEJ473X	1/16W 47K	1	
R8011	ERJ2GEJ220X	1/16W 22	1	
R8012	ERJ2GEJ220X	1/16W 22	1	
R8013	ERJ2GEJ220X	1/16W 22	1	
R8041	ERJ2GEJ330X	1/16W 33	1	
R8151	ERJ2GEJ102X	1/16W 1K	1	
R8211	ERJ2GEJ103X	1/16W 10K	1	
R8221	ERJ2GEJ822X	1/16W 8.2K	1	
R8225	ERJ2GEJ822X	1/16W 8.2K	1	
R8230	ERJ2GEJ222X	1/16W 2.2K	1	
R8231	ERJ2GEJ223X	1/16W 22K	1	
R8232	ERJ2GEJ752X	1/16W 7.5K	1	
R8261	ERJ2GEJ823X	1/16W 82K	1	
R8262	ERJ2GEJ153X	1/16W 15K	1	
R8263	ERJ2GEJ823X	1/16W 82K	1	
R8264	ERJ2GEJ153X	1/16W 15K	1	
R8311	ERJ2RHD242X	1/16W 2.4K	1	
R8312	ERJ2RHD102X	1/16W 1K	1	
R8313	ERJ2RHD912X	1/16W 9.1K	1	
R8314	ERJ2GEJ391X	1/16W 390	1	
R8321	ERJ3RED680V	1/10W 68	1	
R8322	ERJ3GEY0R00V	1/10W 0	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R8325	ERJ3RED680V	1/10W 68	1	
R8326	ERJ3GEY0R00V	1/10W 0	1	
R8331	ERJ3RED680V	1/10W 68	1	
R8332	ERJ3GEY0R00V	1/10W 0	1	
R8335	ERJ3RED680V	1/10W 68	1	
R8341	ERJ3RED680V	1/10W 68	1	
R8401	ERJ2GEJ101X	1/16W 100	1	
R8420	ERJ2GEJ222X	1/16W 2.2K	1	
R8421	ERJ2GE0R00X	1/16W 0	1	
R8531	ERJ2GEJ152X	1/16W 1.5K	1	
R8532	ERJ2GEJ222X	1/16W 2.2K	1	
R8533	ERJ2GE0R00X	1/16W 0	1	
R8541	ERJ2GEJ153X	1/16W 15K	1	
R8551	ERJ2GE0R00X	1/16W 0	1	
R8552	ERJ2GEJ102X	1/16W 1K	1	
R8553	ERJ2GEJ102X	1/16W 1K	1	
R8554	ERJ2GEJ680X	1/16W 68	1	
R8555	ERJ2GEJ2R2X	1/16W 2.2	1	
R8556	ERJ3GEYJ560V	1/10W 56	1	
R8557	ERJ3GEYJ510V	1/10W 51	1	
R8558	ERJ2GEJ473X	1/16W 47K	1	
R8559	ERJ2GEJ153X	1/16W 15K	1	
R8561	ERJ2GE0R00X	1/16W 0	1	
R8562	ERJ2GEJ102X	1/16W 1K	1	
R8563	ERJ2GEJ102X	1/16W 1K	1	
R8564	ERJ2GEJ220X	1/16W 1R	1	
R8565	ERJ2GEJ2R2X	1/16W 2.2	1	
R8566	ERJ3GEYJ560V	1/10W 56	1	
R8567	ERJ3GEYJ510V	1/10W 51	1	
R8568	ERJ2GEJ473X	1/16W 47K	1	
R8601	ERJ2GEJ104X	1/16W 100K	1	
R8611	ERJ2GEJ101X	1/16W 100K	1	
R8621	ERJ2GEJ105X	1/16W 1M	1	
R8622	ERJ2RHD391X	1/16W 390	1	
K0022	ER32KHD391X	1/1044 330		
RX8001	D1H410320002	RESISTOR-RESISTOR	1	
RX8011	D1H88204A024	RESISTOR-RESISTOR	1	
			1	
RX8012 RX8013	D1H88204A024 D1H88204A024	RESISTOR-RESISTOR RESISTOR-RESISTOR	1	
RX8013	D1H88204A024	RESISTOR-RESISTOR	1	
RX8014	D1H88204A024	RESISTOR-RESISTOR	1	
RX8015			1	
	D1H88204A024	RESISTOR-RESISTOR	1	
RX8017	D1H88204A024	RESISTOR-RESISTOR	1	
RX8018	D1H422020001	RESISTOR-RESISTOR	-	
RX8019	D1H422020001	RESISTOR-RESISTOR	1	
RX8020	D1H422020001	RESISTOR-RESISTOR	1	
RX8031	D1H447220001	RESISTOR-RESISTOR	1	
RX8032	D1H447220001	RESISTOR-RESISTOR	1	
RX8111	D1H422320002	RESISTOR-RESISTOR	1	
RX8401	D1H410120001	RESISTOR-RESISTOR	1	
RX8403	D1H410120001	RESISTOR-RESISTOR	1	
RX8531	D1H456020001	RESISTOR-RESISTOR	1	
RX8532	D1H85604A024	RESISTOR-RESISTOR	1	
RX8533	D1H456020001	RESISTOR-RESISTOR	1	

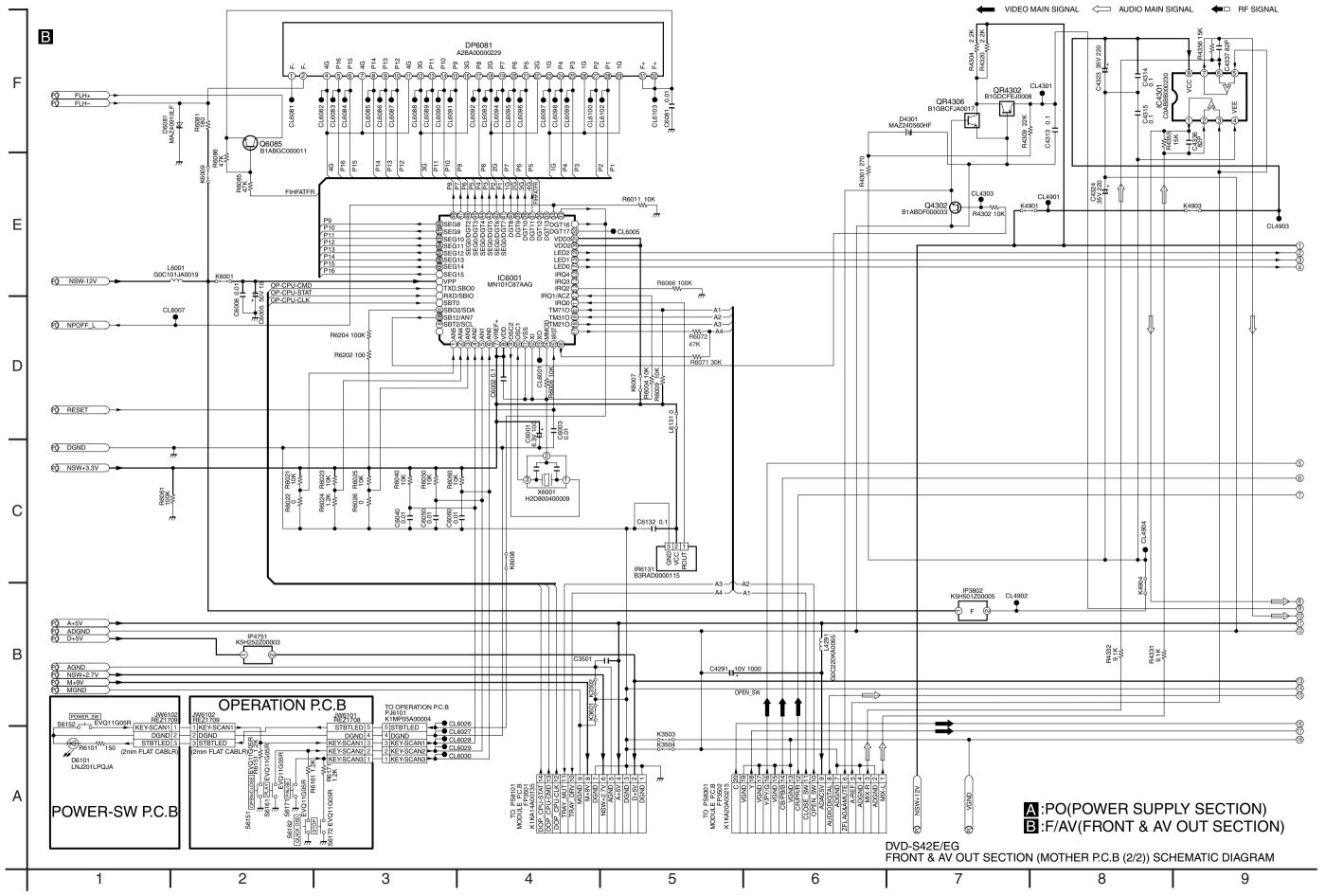
Ref. No.	Part No. Par	rt Name & Description	Pcs	Remarks
RX8534		SISTOR-RESISTOR	1	
RX8611	D1H447220001 RE	SISTOR-RESISTOR	1	
RX8691		SISTOR-RESISTOR	1	
S2601	K0L1BA000078 SW	VITCH	1	
S2602		VITCH	1	
S6151		VITCH	1	
S6152		VITCH	1	
S6161		VITCH	1	
S6162		VITCH	1	
S6171		VITCH	1	
S6172		VITCH	1	
			•	
T1021	G4D2A0000265 TR	ANSFORMER	1	Δ
VA1002	ERZVA5Z471 TR	ANSIENT/SURGE ABSORBER	1	Δ
VATOUZ	LIZVAJZ471	ANOICH 1/30NGL ADSONDEN	'	
VD4	EVMONOVOODOO VO			
VR1	EVM2NSX80BS3 VR		1	
VR2	EVM2NSX80BS3 VR	<b>(2</b>	1	
14/000	ED IOOEVODOOV	2014 0		
W220		20W 0	1	
W221		20W 0	1	
W222		20W 0	1	
W223		20W 0	1	
W224		20W 0	1	
W225		20W 0	1	
W226		20W 0	1	
W227		20W 0	1	
W228		20W 0	1	
W229		20W 0	1	
W230		20W 0	1	
W231		20W 0	1	
W232		20W 0	1	
W233		20W 0	1	
W234		20W 0	1	
W235		20W 0	1	
W236		20W 0	1	
W237		20W 0	1	
W238		20W 0	1	
W239		20W 0	1	
W240		20W 0	1	
W241		20W 0	1	
W242		20W 0	1	
W243		20W 0	1	
W244		20W 0	1	
W245		20W 0	1	
W246		20W 0	1	
W247		20W 0	1	
W248		20W 0	1	
W249		20W 0	1	
W250		20W 0	1	
W253	ERJ3GEY0R00V 1/2	20W 0	1	
W256	ERJ3GEY0R00V 1/2	20W 0	1	
W257	ERJ3GEY0R00V 1/2	20W 0	1	

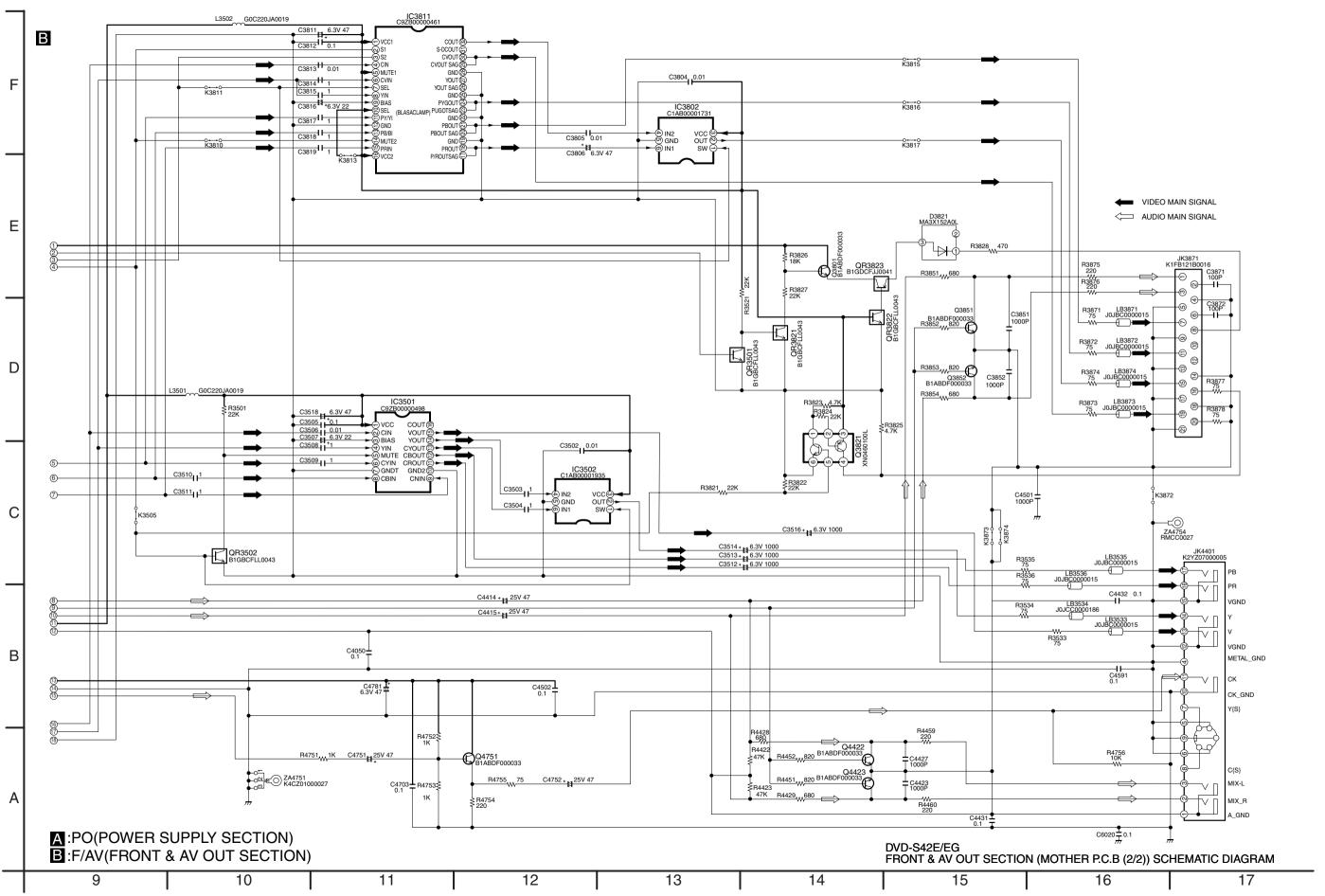
			1 .	İ
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
W258	ERJ3GEY0R00V	1/20W 0	1	
X6001	H2D800400009	CERAMIC OSCILLATOR	1	
X8621	H0J270500080	CRYSTAL OSCILLATOR	1	
ZA1001 ZA1002	EYF52BCY EYF52BCY	FUSE HOLDER FUSE HOLDER	1	
ZA1111	RMCC0001-1	EARTH SPRING	1	
ZA1112	K4CZ01000027	TERMINAL	1	
ZA4751	K4CZ01000027	TERMINAL	1	
ZA4754	RMCC0027	TERMINAL	1	

# 20. SCHEMATIC DIAGRAM FOR PRINTING WITH A4 FLE060200002JA

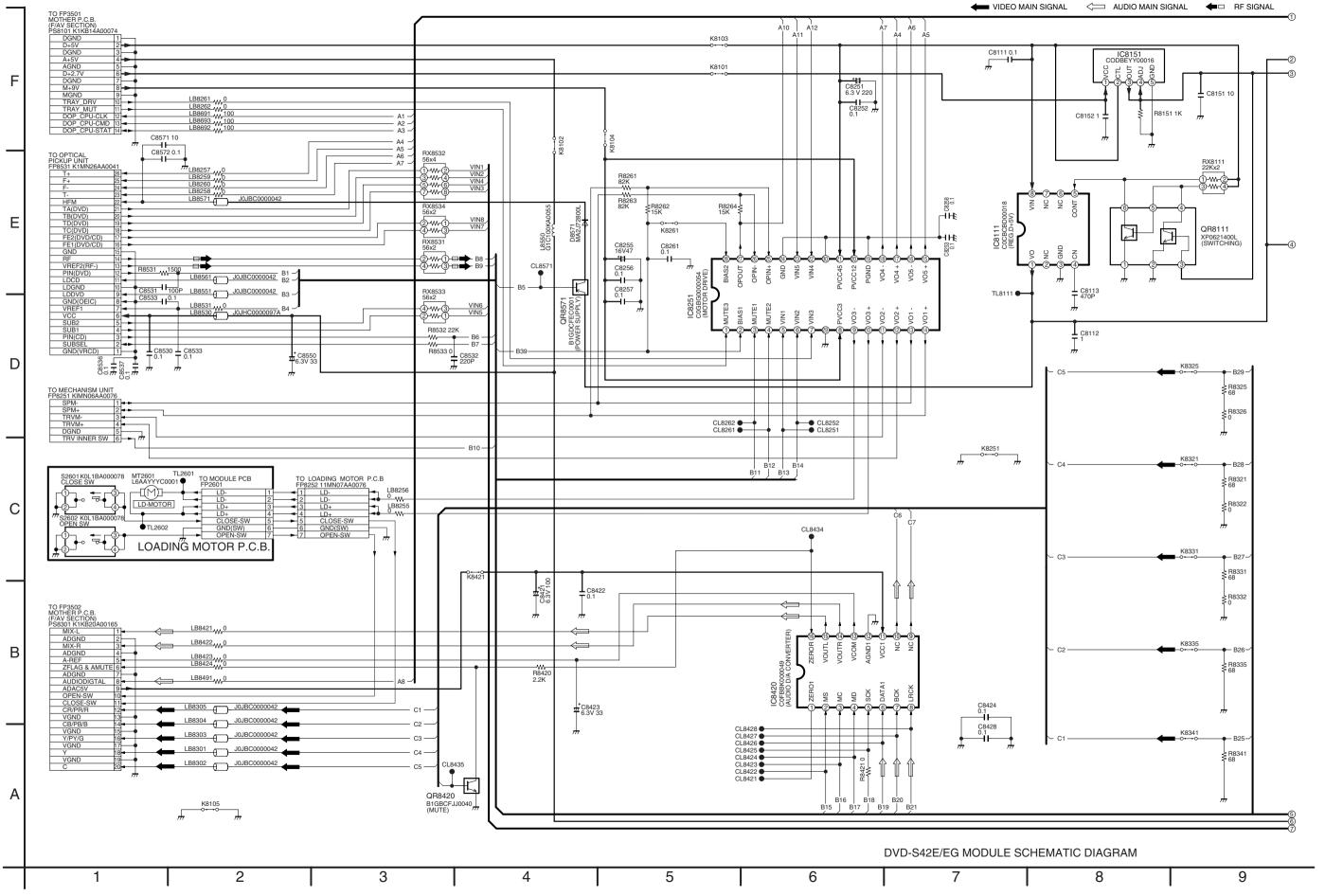
		MOTHER I	P.C.B.		
Transistor		CL1105	E-5	CL6099	F-2
Q1051	D-5	CL1106	F-5	CL6100	F-2
Q1115	E-6	CL1107	E-6	CL6102	F-2
Q3801	B-3	CL1108	F-6	CL6103	F-2
Q3821	A-4	CL1109	F-4	CL6189	F-1
Q3851	A-2	CL1111	E-5	CL6190	F-2
Q3852	A-2	CL1112	F-5	CL6191	F-2
Q4302 Q4422	E-4 A-5	CL1113	E-4	CL6192	F-2
Q4423	A-5 A-5	CL1115	E-6	CL6194	F-2
Q4751	B-5	CL1116	E-6	CL6196	F-2
Q6085	F-3	CL3501	A-1	CL6198	F-2
Transistor-res		CL3502	A-1	CL6201	D-2
		CL3503	A-1	CL6202	D-2
QR1115	F-6	CL3504	A-1		LD 2
QR3501	B-3	CL3505	A-1	Connector	
QR3502	B-4	CL3506	A-1	FP3501	D-3
QR3821	B-3	CL3507	A-1	FP3502	C-3
QR3822	B-3	CL4301	E-4	P1001	A-6
QR3823	B-3	CL4303	E-4	PJ6101	E-6
QR4302	E-4	CL4901	E-4	JK3871	A-3
QR4306	E-4	CL4902	E-4	JK4401	A-4
Inntegrated C	ircuit	CL4903	E-4	Transformer	·
IC1021	C-6	CL6001	E-2	T1021	D-6
IC1101	D-5	CL6005	E-3		
IC1151	E-6	CL6007	E-3		
IC1195	E-5	CL6026	F-3		
IC3501	B-4 B-4	CL6027	F-3		
IC3502 IC3802	A-3	CL6028	F-3		
IC3811	B-3	CL6029	F-3		
IC4301	C-3	CL6030	E-4		
IC6001	E-2	CL6081	F-1		
Test Point		CL6082	F-1		
CL1001	B-6	CL6083	F-1		
CL1002	B-6	CL6084	F-1		
CL1003	B-6	CL6085	F-1		
CL1004	A-6	CL6086	F-1		
CL1005	B-6	CL6087	F-1		
CL1006	B-6	CL6088	F-1		
CL1007	B-6	CL6093	F-2		
CL1101	F-5	CL6095	F-2		
CL1104	E-5	CL6097	F-2		

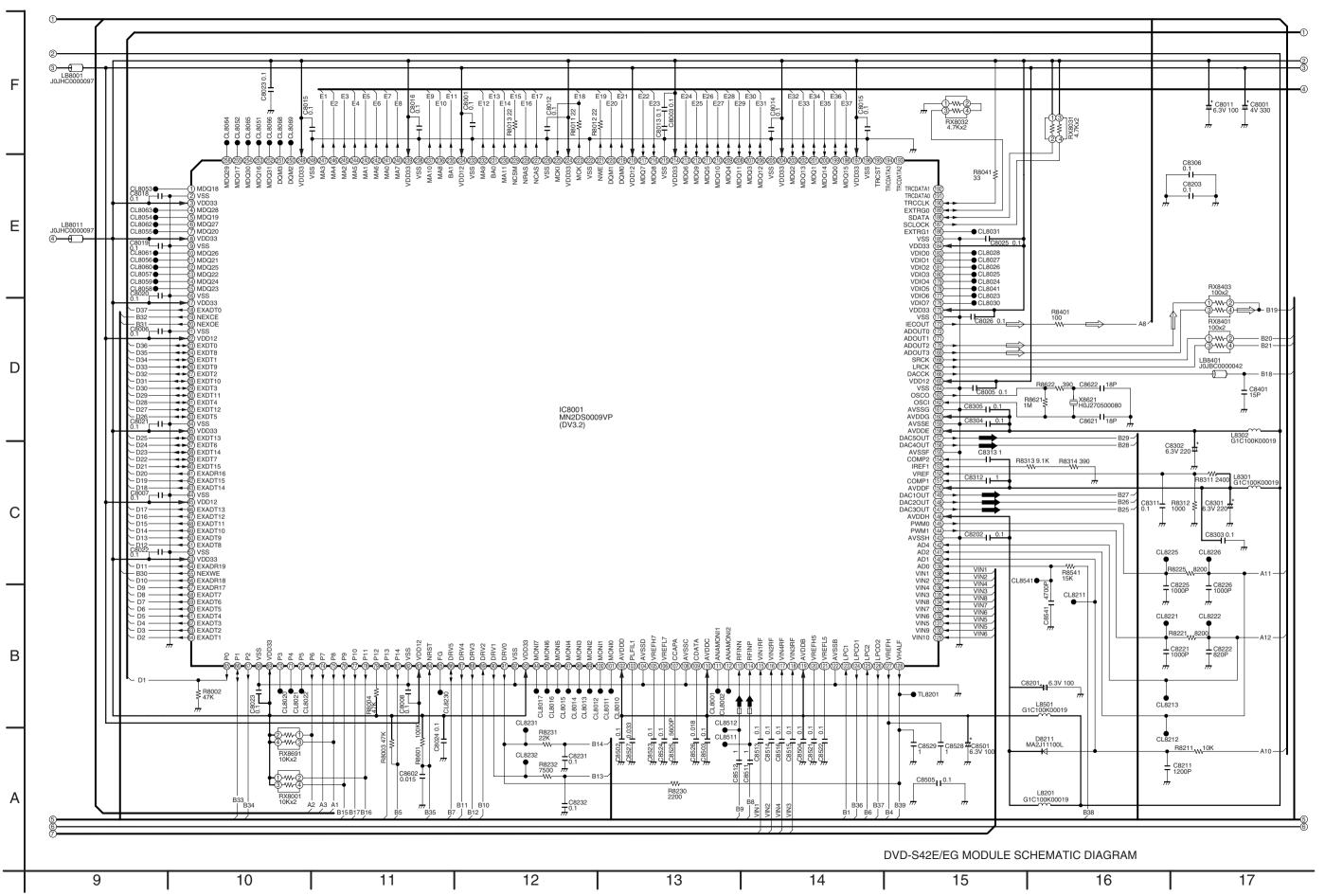
ADDRESS INFORMATION

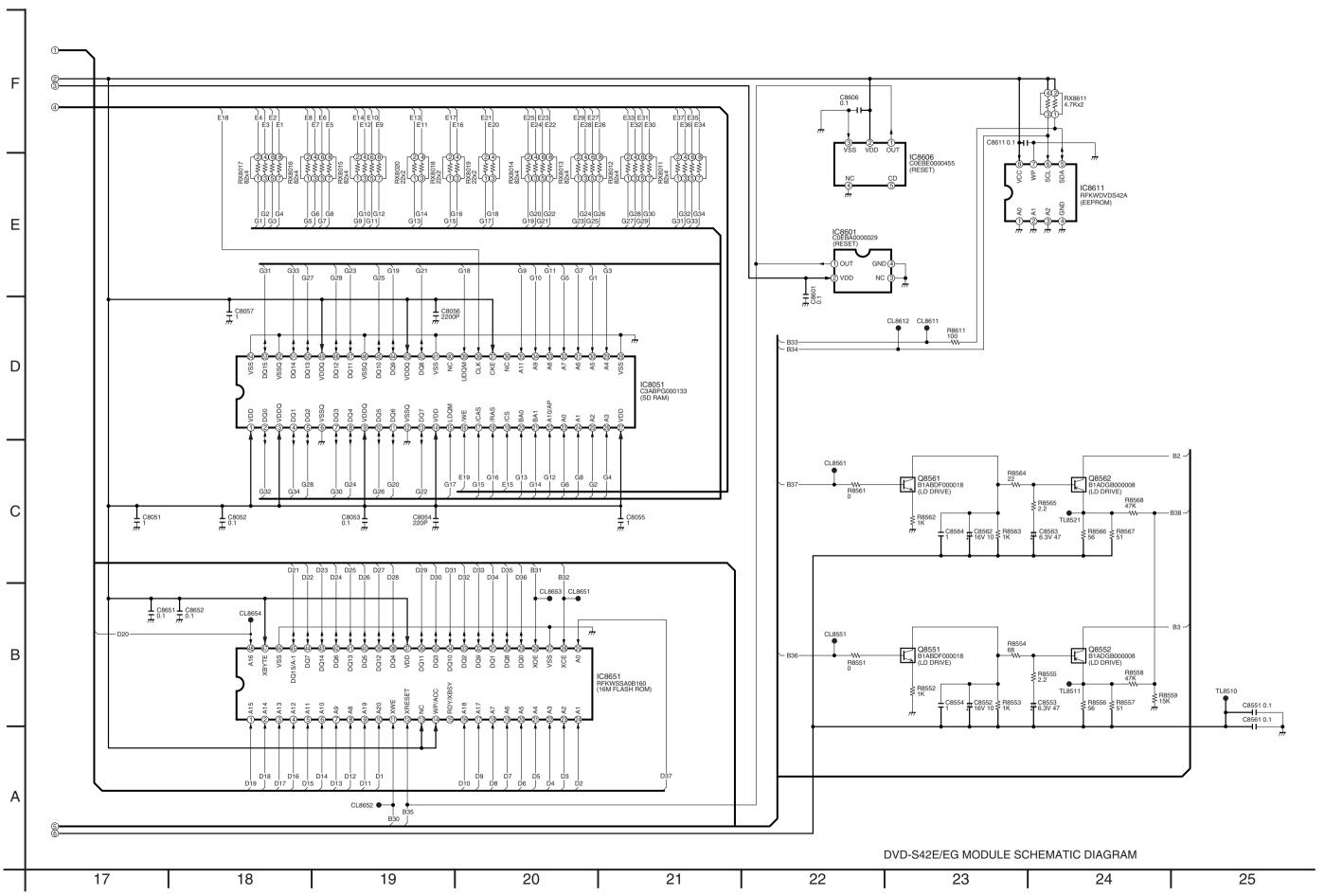


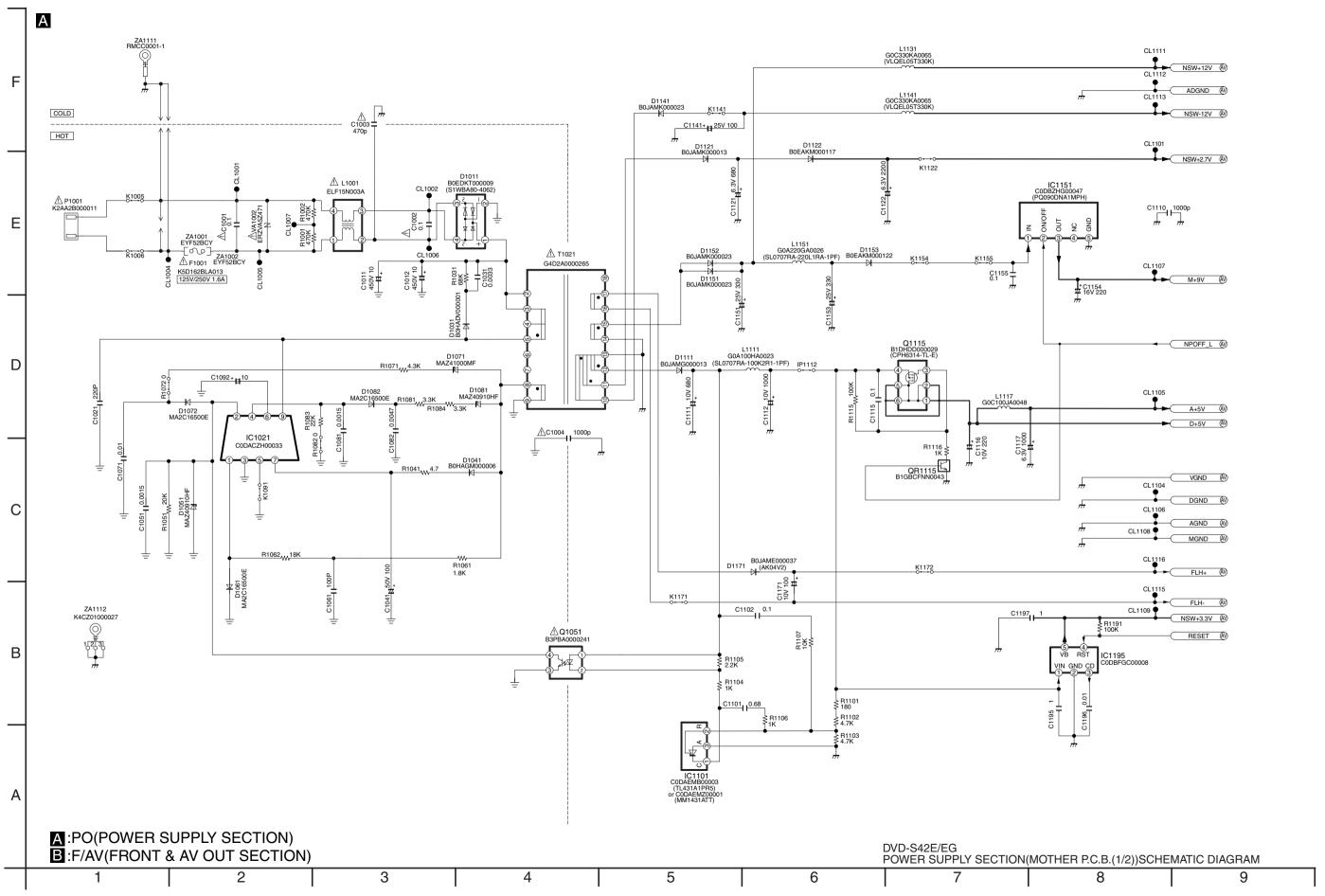






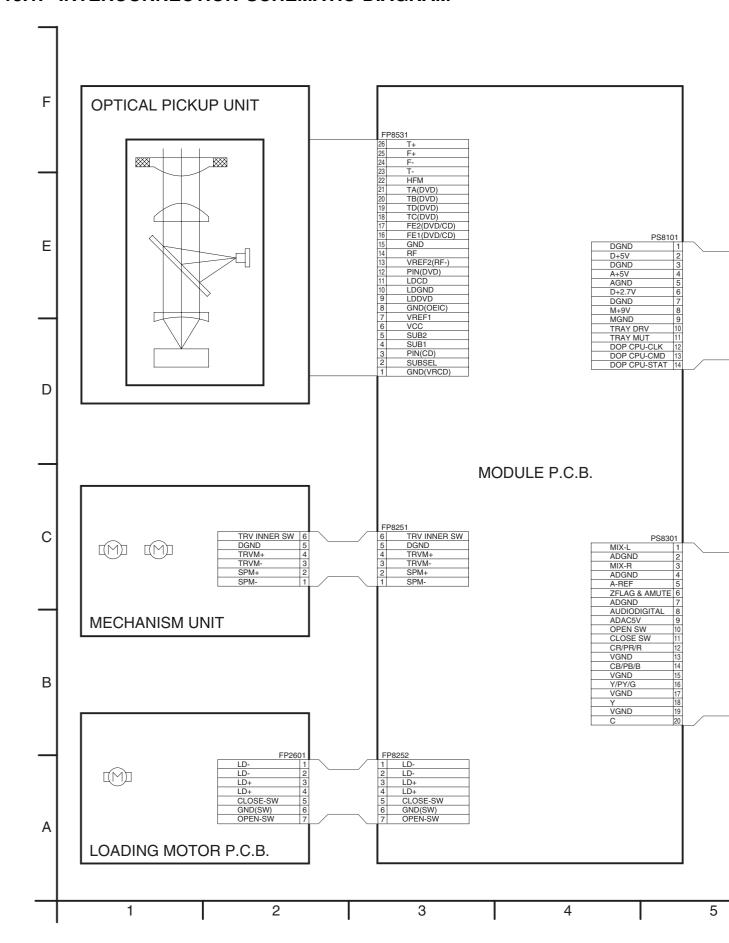




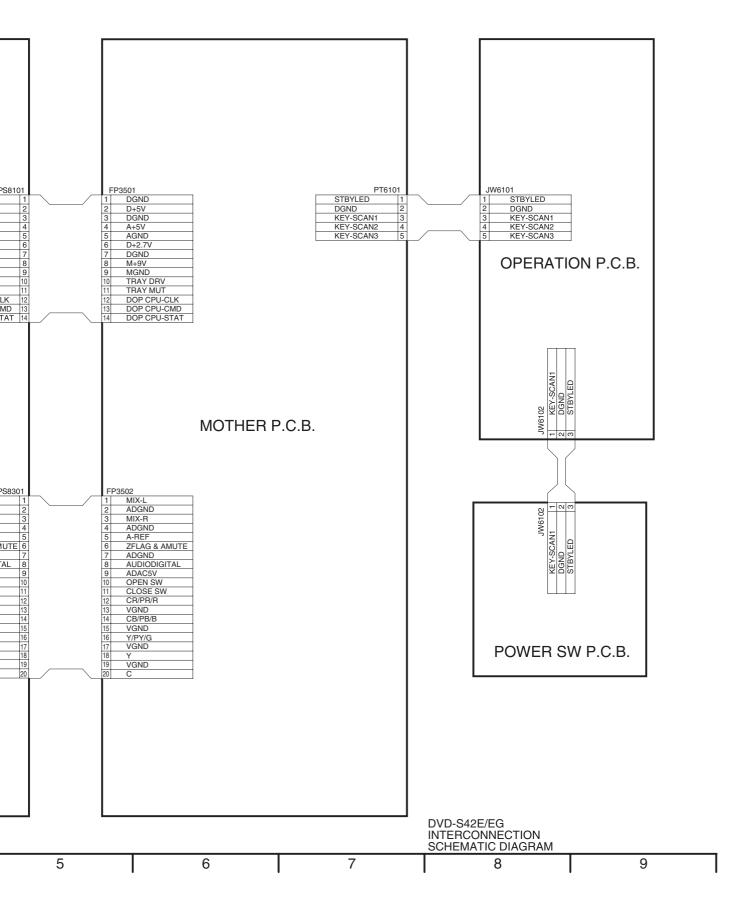


## 15 INTERCONNECTION SCHEMATIC DIAGRAM & SCHEMATIC I

### 15.1. INTERCONNECTION SCHEMATIC DIAGRAM



# IATIC DIAGRAM NOTES



#### 15.2. SCHEMATIC DIAGRAM NOTES

This schematic diagram may be modified at any time with the development of new technology.

#### Important safety notice:

Components identified by  $\Lambda$  mark have special characteristics important for safety.

Furthermore, special parts which have purpose of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacture's specified parts shownin theparts list.

#### Important safety notice:

There are special components used in this equipment which are important for safety.

These parts are marked by  $\triangle$  in the schematic diagrams. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original designwithout permission of manufacturer.

#### Caution!

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

Cover the parts boxes made of plastics with aluminum foil.

Ground the soldering iron.

Put a conductive mat on the work table.

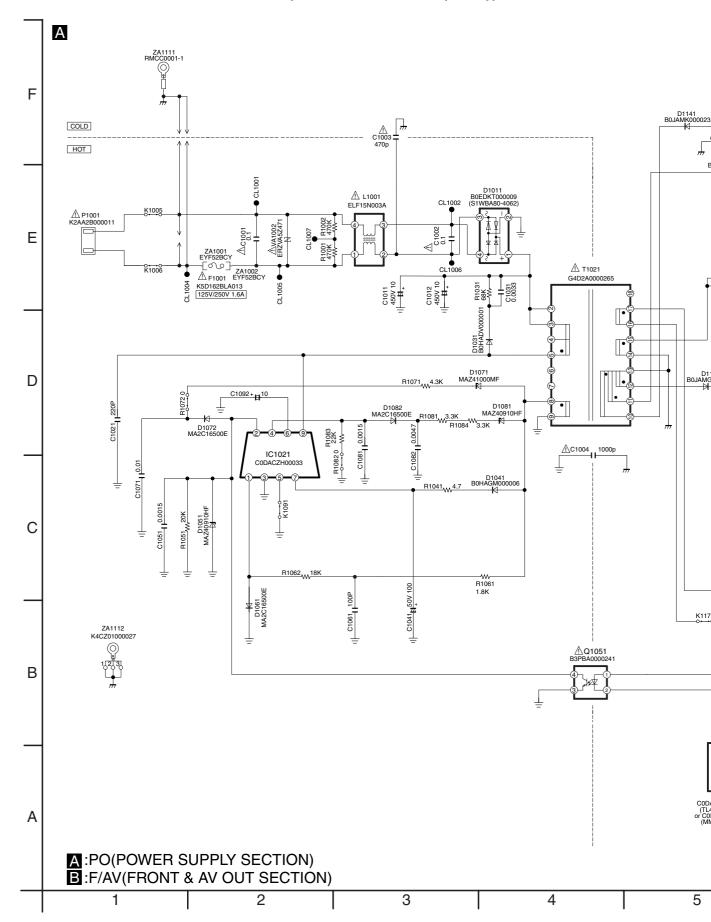
Do not touch the legs of IC or LSI with the fingers directly.

se iin

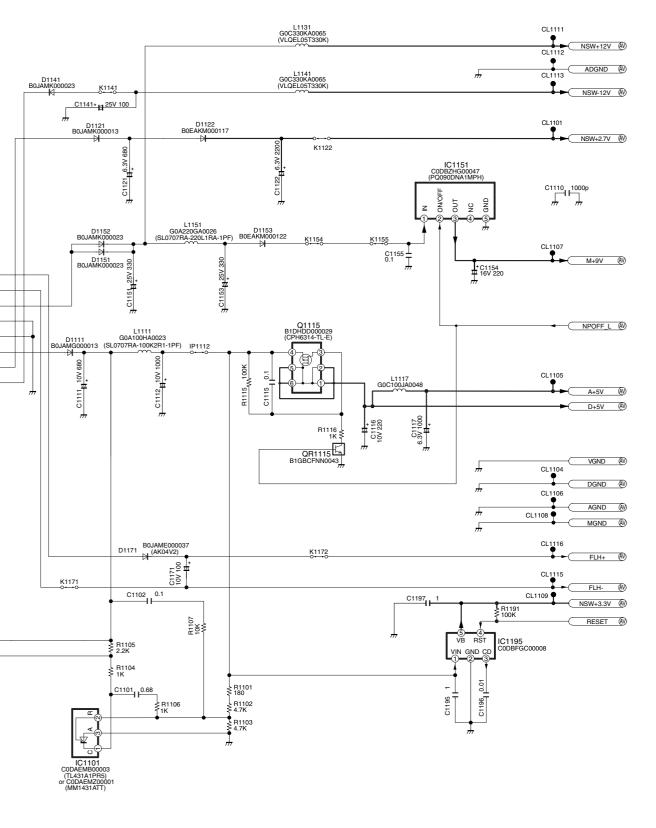
ith of

# **16 SCHEMATIC DIAGRAM**

### 16.1. POWER SUPPLY SECTION (MOTHER P.C.B. (1 / 2)) SCHEMATIC DIAGRAM

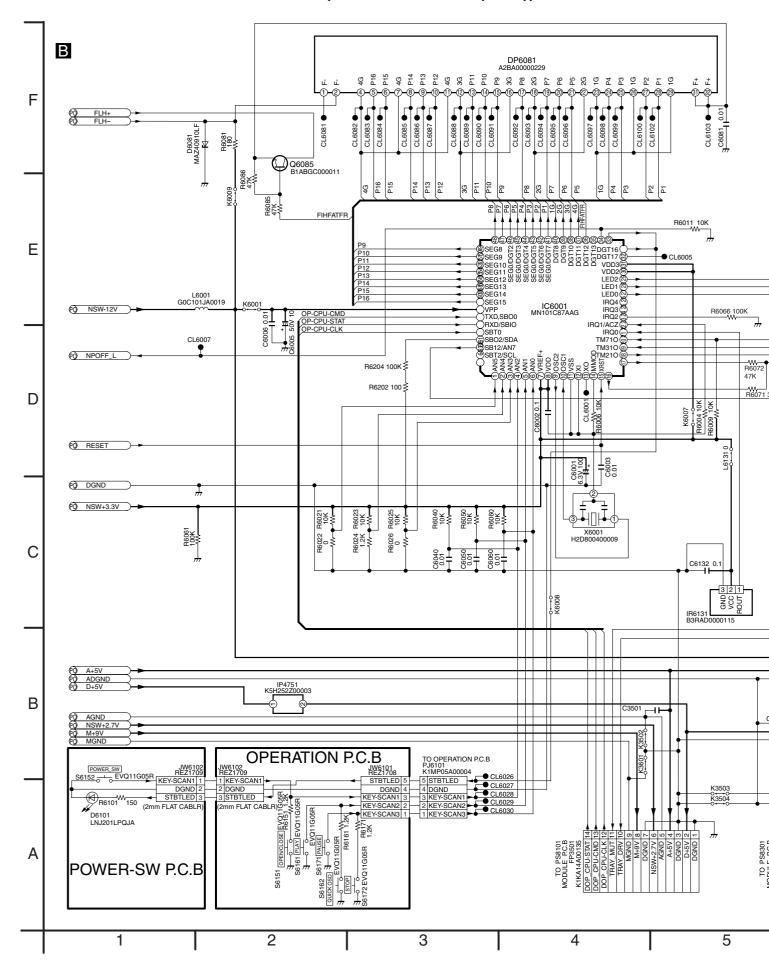


### **IAGRAM**

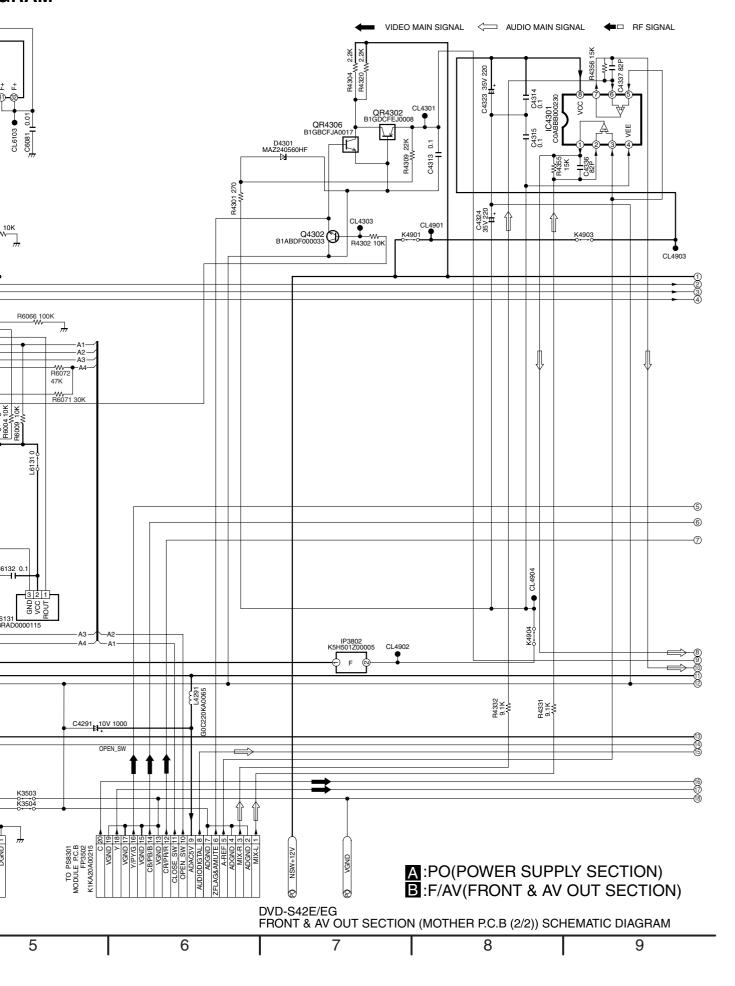


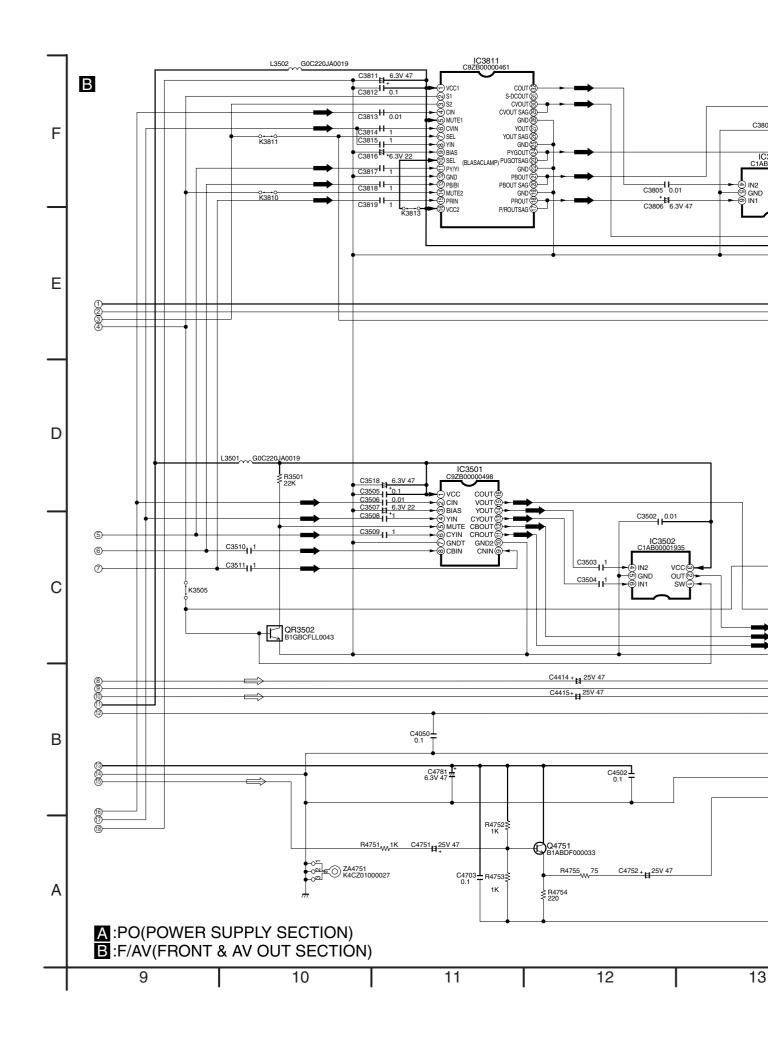


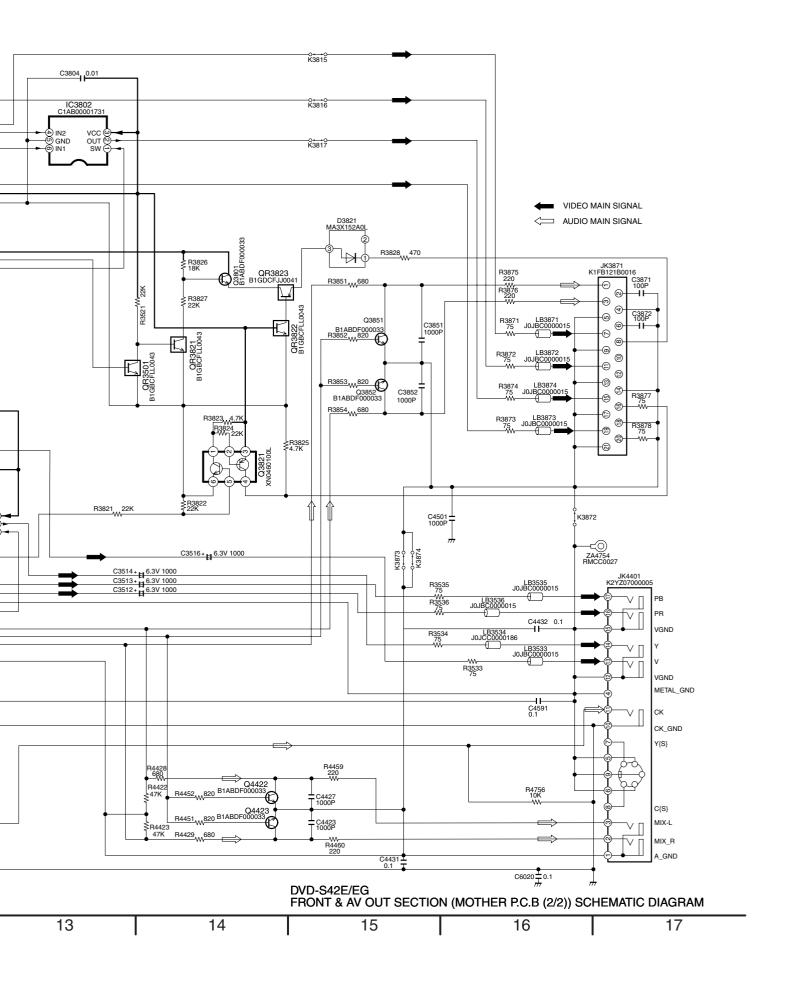
## 16.2. FRONT & AV OUT SECTION (MOTHER P.C.B. (2 / 2)) SCHEMATIC DIAGRAM



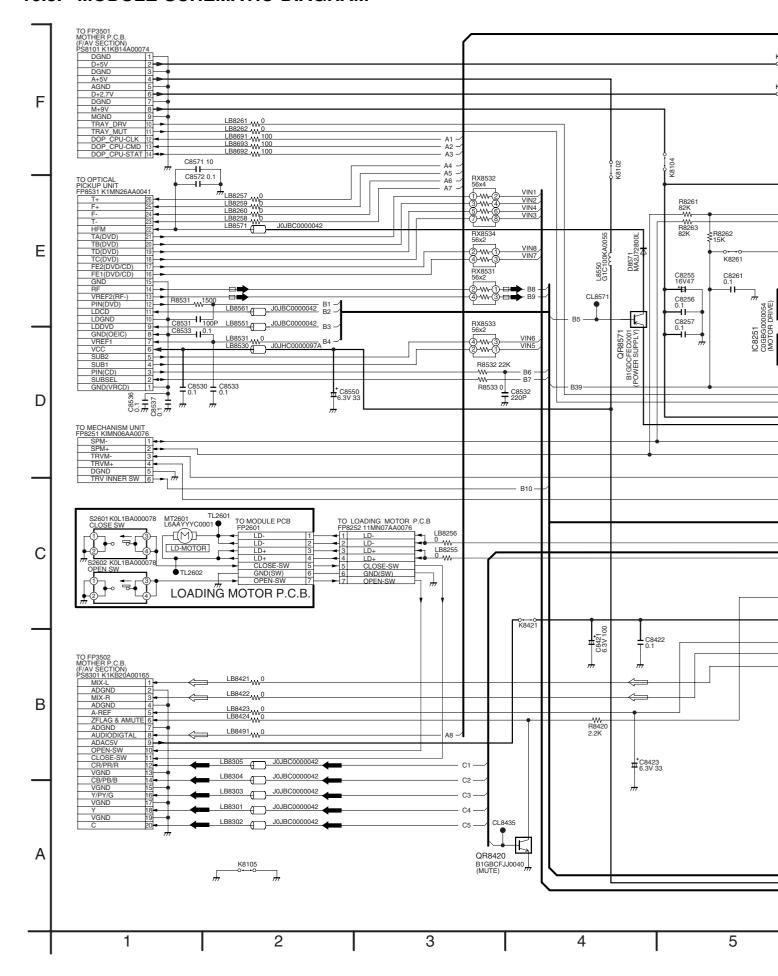
### GRAM

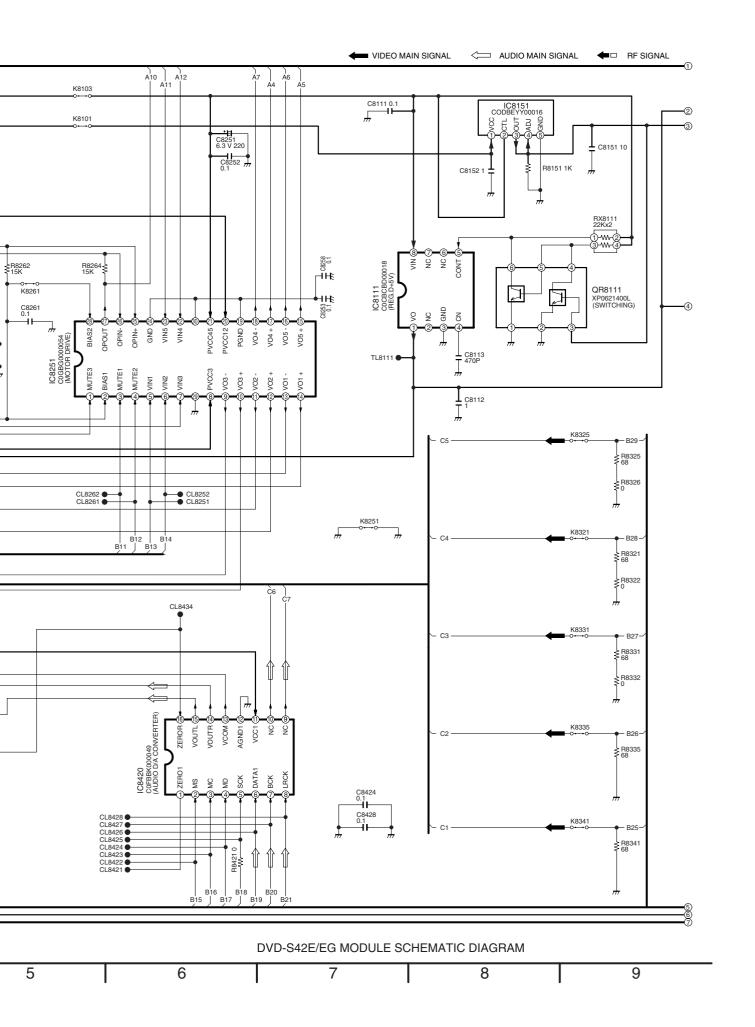


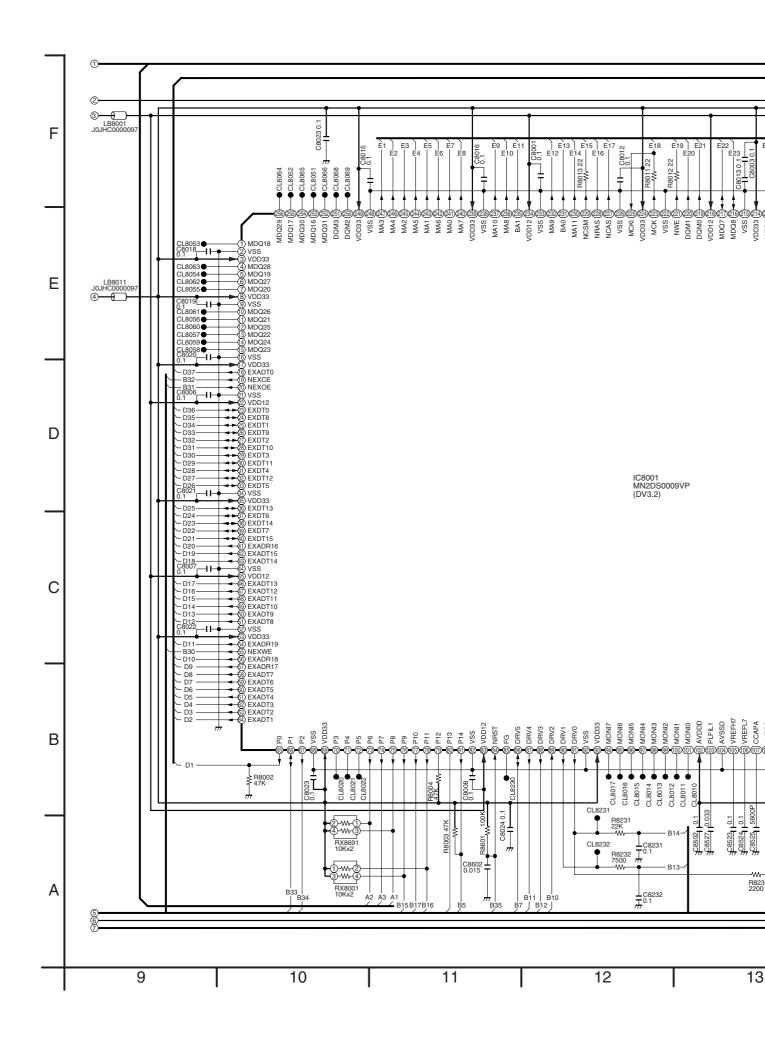


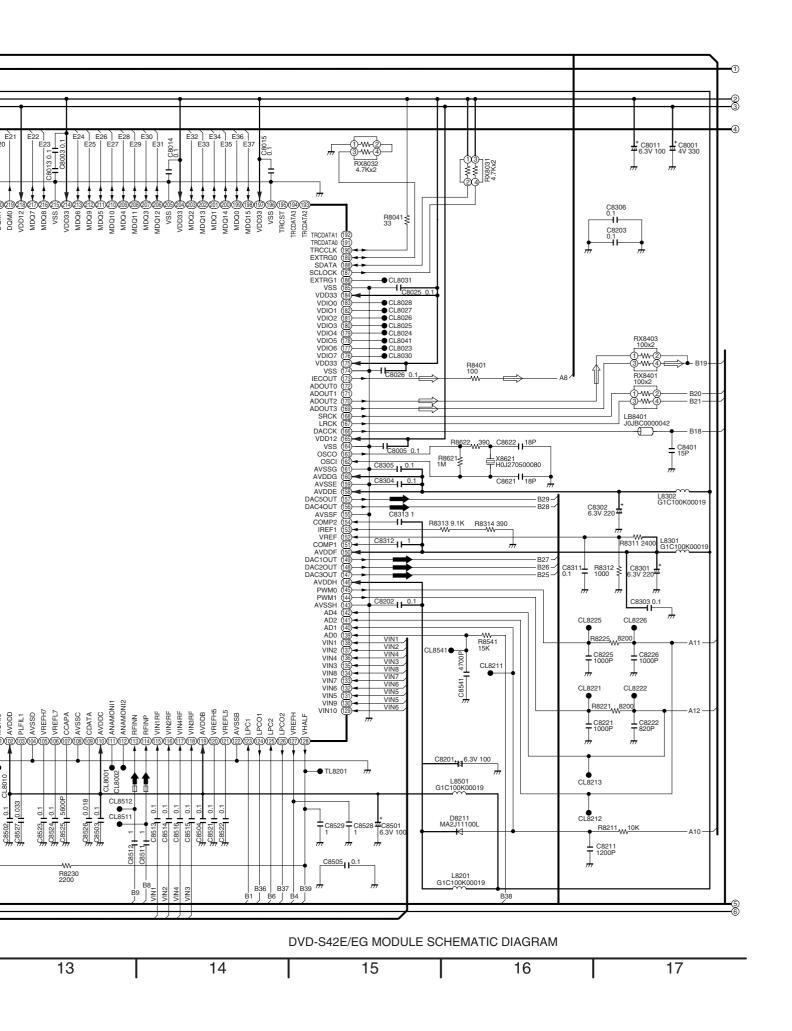


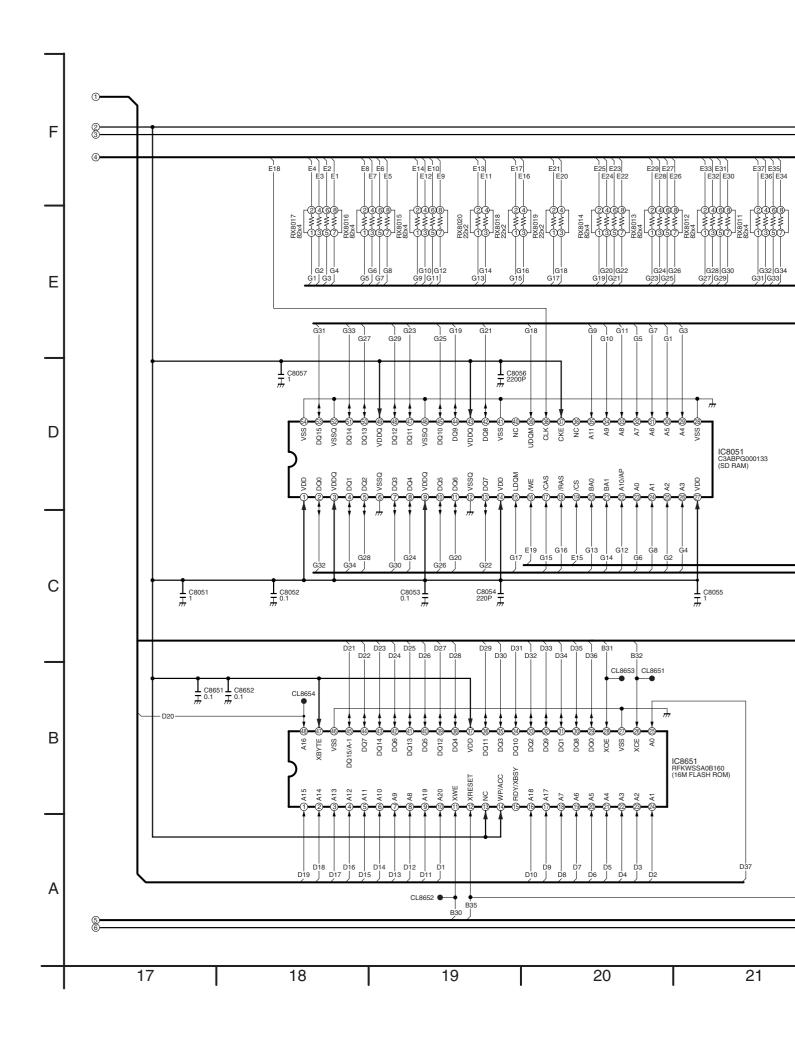
#### 16.3. MODULE SCHEMATIC DIAGRAM

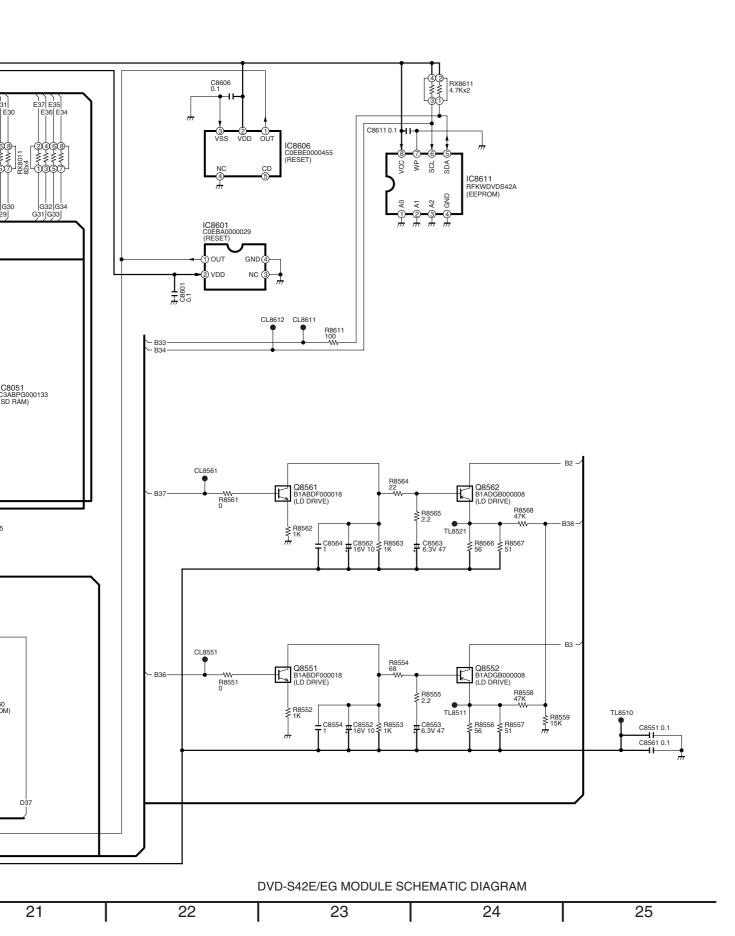








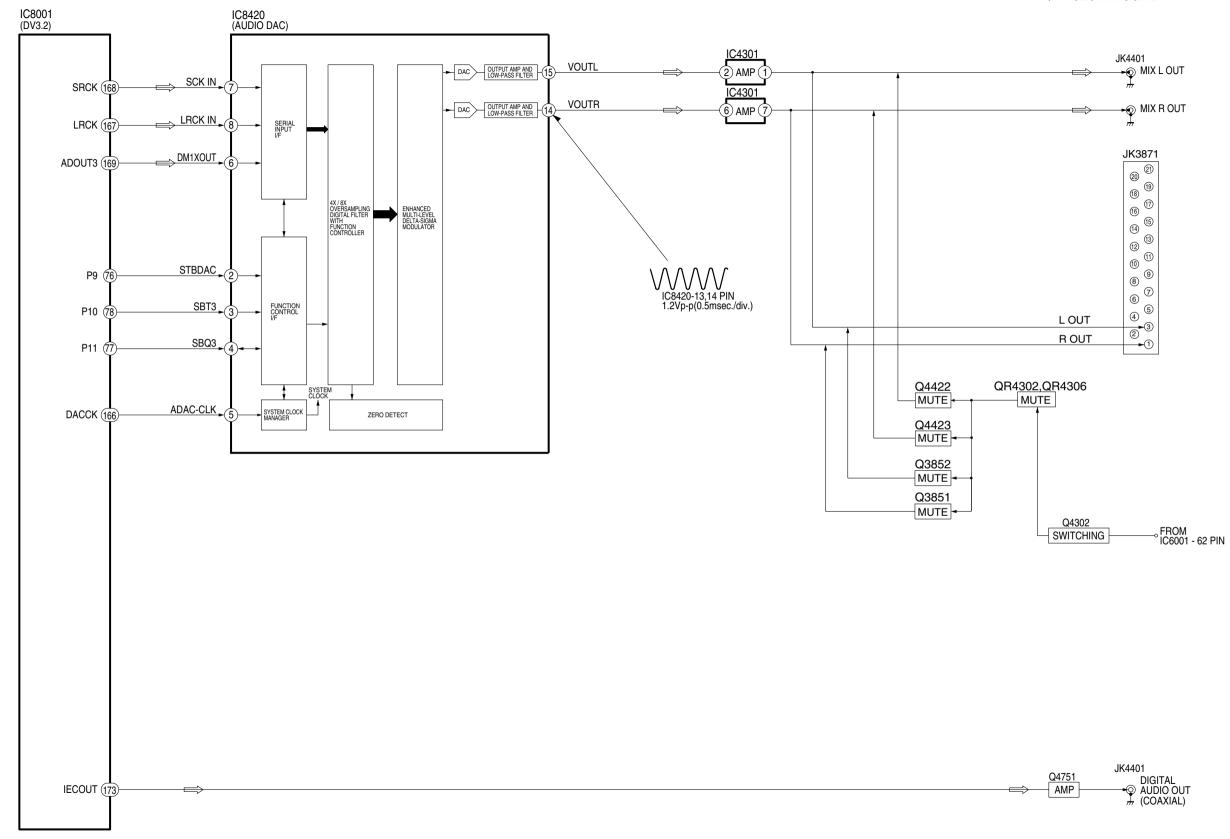


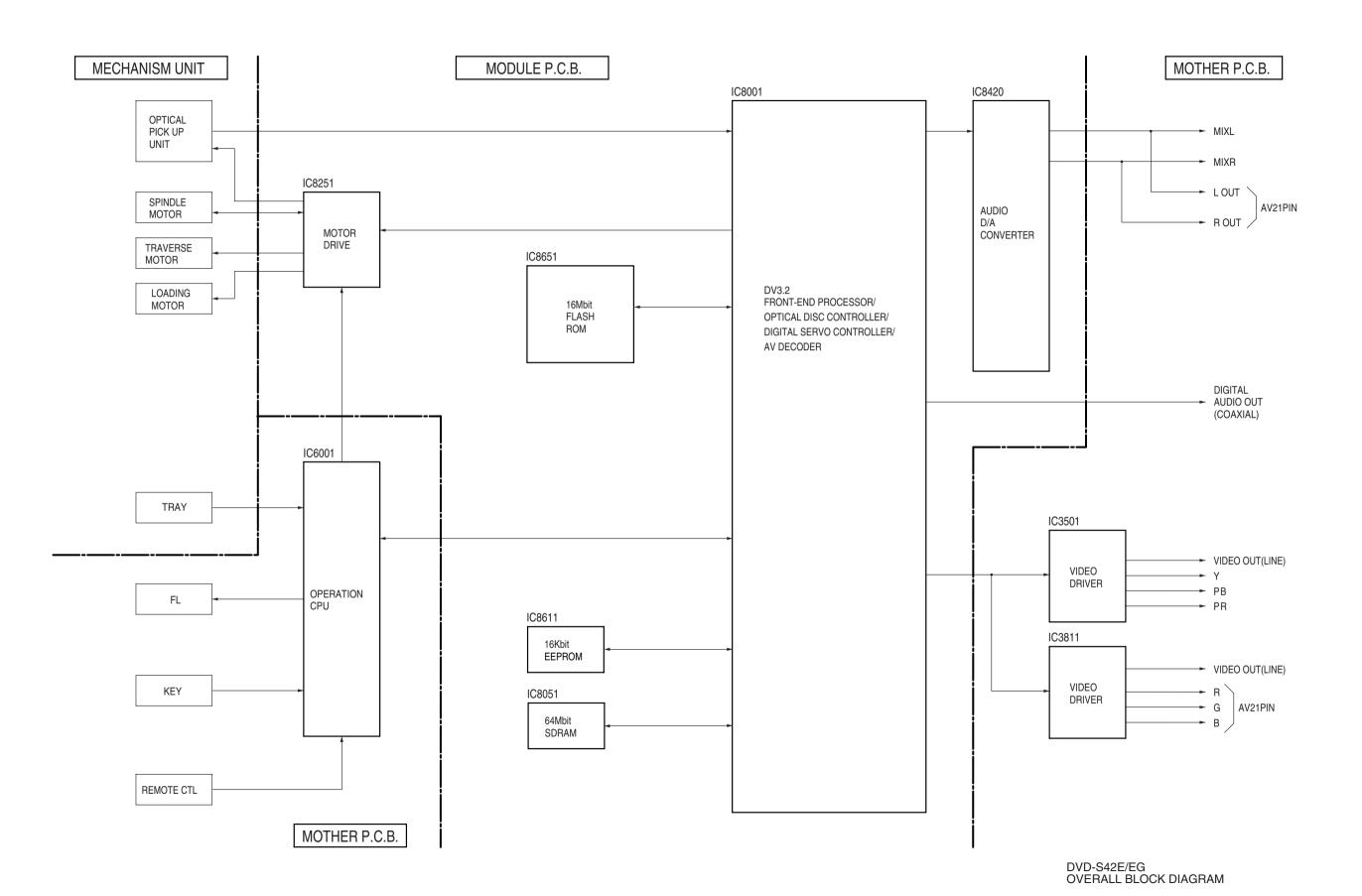


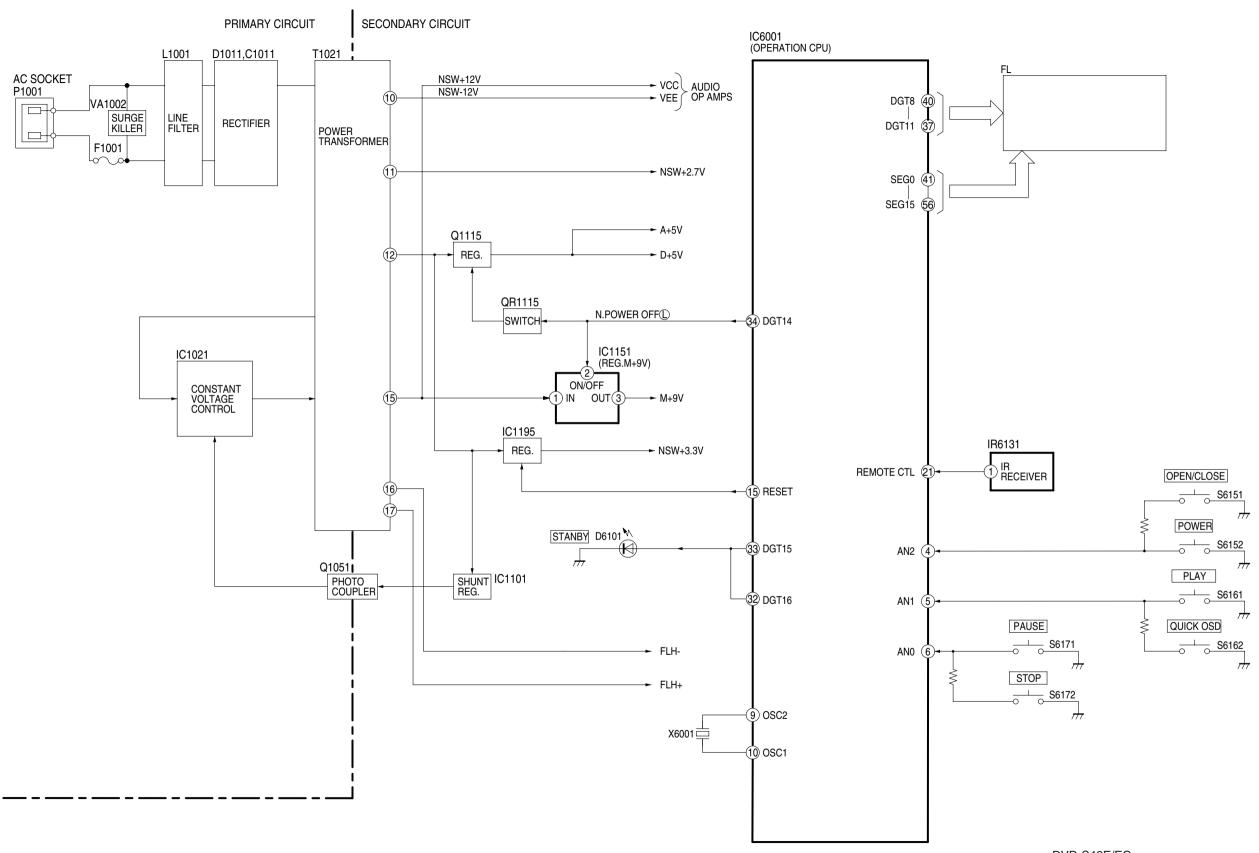
Ref No.											001									
MODE \	1 3.2	3.3	3	3.3	5 3.3	6 3.3	7 3.3	8 3.3	9	10 3.3	3.3	12 3.3	13 3.3	14 3.3	15 3.3	16	17 3.3	18 3.3	19 3.3	20
STOP	3.2	3.1	0	3.1	3.3	3.3	3.1	3.1	0	3.2	3.1	3.3	3	3.2	2.9	0	3.2	3.1	3.3	0
Ref No. MODE	21	22	23	24	25	26	27	28	29	1C8 30	001	32	33	34	25	36	37	38	39	40
PLAY	0	3.3	2.3	1.8	1.1	1.2	2.3	3.3	0	0.9	31 0.9	0.7	0	3.3	35 0	0	0	3.3	0	0
STOP	0	3.3	3.3	0	3.3	1.2	0	3.3	0	0.7	0.5	0.3	0.8	3.3	0	1.1	2.3	2.5	1.4	1.4
Ref No. MODE	41	42	43	44	45	16	47	48	49		001	52	EO	54	T ==	F.C.	F 7	58	T 50	60
PLAY	3.3	3.3	0	1.2	0	46 0	3.3	3.3	0	50 3.3	51 0	2	53 3.3	0	55 0	56 3.3	57 3.3	3.3	59 3.3	3.3
STOP	2.8	0.6	2.5	1.2	2.1	1	0.6	3.3	0	1.9	2.8	2.6	3.3	0	3.3	3.3	3.3	3.3	3.3	3.3
Ref No. MODE	61	62	63	64	65	66	67	68	69	1C8 70	001 71	72	73	74	75	76	77	78	79	80
PLAY	0	3.3	0	0	0	0.1	2.9	2.8	2.7	3	0	0	3.2	0	1.6	2	1.7	0.1	3.3	0
STOP	0	3.3	0	0	0	0	0	2.8	2.8	0	0	0	0	0	1.6	1.6	1.7	3.3	0	3.3
Ref No. MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	2.8	3.3	3.3	3.3	0	0	0	0	0	1.2	0	0	0	0	0	0	0	3.3	0.7	0
STOP	3.2	0	0	3.3	0	0	0	0	1.2	0	0	0	0	0	0	0	0	3.3	0.8	0
Ref No. MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
PLAY	2.3	2.1	1.8	1.3	0	1.7	3.3	2.1	2.1	1.8	1.8	1.3	1.3	1.6	1.6	1.6	1.6	3.3	1.9	1.5
STOP Ref No.	2.3	2.1	1.8	0	0	1.8	3.2	2.1	2	1.8	1.8	1	1.6	1.6	1.6	1.6	3.3	3.3	1.8	1.5
MODE MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
PLAY	1.4	0	0.4	1	0.1	0.1	2.2	1.6	2.6	2.6	2.6	2.6	2.6	2.6	2.4	2.4	2.4	2.4	1.6	1.8
STOP Ref No.	1.4	0	0	0.1	0.1	0.6	2.2	1.6	2.2	2.2 IC8	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	1.6	1.6
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
PLAY STOP	3.3	1.2	1.9	2.1	0	1.6 1.6	1.6 1.6	1.6 1.6	0.6	3.3	0.4	0.4	1	1	2.2	0.7	0	0.9	3.3	0
Ref No.	0.0	1.6	۷	۷.۱		1.0	1.0	1.0	0.4		0.5	0.4				0.4		0.8	J.3	
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
PLAY STOP	3.3	0	1.6 1.6	0	1.5	1.5 1.5	3.3	0.1	1.7	1.6 1.6	1.3	1.2	0	0	0	1.1	3.3 1.6	3.3	0	3.3
Ref No.										IC8	001									
MODE \ PLAY	181 0	182 3.3	183 0	184 0	185 0	186 0	187 0	188 0	189 0	190 3.3	191 0	192	193 1.6	194 1	195 1	196 3.3	197 3.3	198 0.8	199 0.8	200 0.7
STOP	0	3.3	0	0	0	0	0	0	0	3.3	0	0.8	1.6	1	0.9	3.3	3.3	0.8	0.8	0.9
Ref No.	004	000	000	004	005	000	007	000	000		001	L 040	040	04.4	L 045	1 040	047	1 040	T 040	T 000
MODE \ PLAY	201 0	3.3	203	204 1.5	205 0	206 1.7	207 0.5	208 3.1	209 3.3	210 3.3	211 0.6	212 0.6	213 0	214 0	215 3.1	3.3	3.3	218	1.2	1.2
STOP	0	3.3	0	0.8	0.9	0	0	1.8	3.3	3.3	2.2	2.2	0	0	0	3	3.3	0	1.2	1.6
Ref No. MODE	221	222	223	224	225	226	227	228	229	1C8 230	001 231	232	233	234	235	236	237	238	239	240
PLAY	2.3	0	0	0	3.3	1.6	0	0	0	0	3.3	1.6	0	3	0	1.2	0	0	3.3	3
STOP	0	0	1.6	0	3.3	1.6	0	1.5	1.5	0	3.3	3.3	0.5	0.8	0	0.2	0	0	3.3	3.1
Ref No. MODE	241	242	243	244	245	246	247	248	249	250	001 251	252	253	254	255	256				
PLAY	3	0	1.6	3.3	3.2	3.3	0	3.2	2.3	0	2.4	3.1	0	3.2	3.3	3.2				
STOP Ref No.	1.6	0	1.6	3.2	3.2	3.3	0	0	3.3	0 IC8	3.3 051	3.3	0	0	3.3	3				<u> </u>
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY STOP	3.3	3.2	3.3	3.2	3.2	0	3.2	3.2	3.2	3.3	3.2	0	3.3 2.9	3.1	3.3 2.8	3.3	3.3	3.2	3.2	1.5 2.7
Ref No.	3.3	3	3.3	3.2	3.1	U	3.3	3.3	3.3		051	1 0	2.9	3.3	2.0	3.3	3.2	3.2	3.2	2.1
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY STOP	1.5 1.7	0	0.1	0.1	0.2	3.1 1.6	3.3	0	2.3 1.6	1.6 1.6	1.5 1.6	1.5 1.5	0.1	0	0	0	3.3	3.3 1.6	2.4	0
Ref No.							IC8	051												
MODE \ PLAY	41 0	42 3.2	43 3.3	44 3.2	45 3.2	46 0	47 3.1	48 3.2	49 3.3	50 3.1	51 3.2	52 0	53 3.3	54 0	<u> </u>	-		-		-
STOP	0	3.2	3.3	3.2	3.1	0	3	3.2	3.3	2.9	2.9	0	3.1	0						
Ref No.	1 1	2 1	,	IC8		6	7			4	0	IC8151		-						
MODE \ PLAY	3.3	0	0	2	5 4.7	6 0	7	8 5.1		9.2	11.3	1.2	7.5	5 6.4	$\vdash$			$\vdash$		
STOP	3.3	0	0	2.3	4.7	0	0	5.1		9.2	5	1.2	1.2	0						
Ref No. MODE	1	2	3	4	5	6	7	8	9	108	251 11	12	13	14	15	16	17	18	19	20
PLAY	3.3	1.6	3.3	1.8	1.6	1.6	1.6	9	4.3	4.3	4.3	4.2	3.1	5.5	2.5	2.6	2.6	2.6	0	9
STOP Ref No.	3.3	1.6	0	0 IC82	1.6 251	1.6	1.6	9	4.2	4.2	4.2	4.2	3.8	3.8	2.6	2.6	2.6	2.6	0	9
MODE MODE	21	22	23	24	251	26	27	28												
PLAY	5.1	1.6	1.6	0	1.8	1.8	1.8	1.6												
STOP Ref No.	5.1	1.6	1.6	0	1.7	1.8	1.6	1.6		IIC8	420				<u> </u>			-		
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY STOP	6.4	9.7 3.3	9.2 2.9	9.7	7.9 1.7	7.6	8 1.7	8 1.7	0	0	11.3 5	6.3	8.8	8.8 2.4	8.8 2.4	11.2				
Ref No.		3.3 IC86		ა.ა	1./	0	1./	IC8651				0	2.5	2.4		1 0 3611				
MODE	2-			0.0		1	2	3	4	5		1	2	3	4	5	6	7	8	
PLAY STOP	0.5	-1.7 -1.7	-2.8 -2.8	-2.8 -2.8		0.5 0.5	0.5	-2.8 -2.8	-2.8 -2.8	0		0	0	0	0	3.3	3.3	0	3.3	
Ref No.										IC8										
MODE	1 2	2 0.7	3 0.7	4 0	5	6 2.1	7	8 2.7	9 1.5	10 0.5	11 0.4	12 0	13 0.5	14 0	15 0	16 0	17 0.6	18 0.7	19 0	20
PLAY STOP	2	0.7	0.7	0	0	2.1	0	2.7	1.5	0.5	0.4	0	0.5	0	0	0	0.6	0.7	0	0
Ref No.	'														·				:	
MODE	21 0	22 2.7	23	24 0	25 -2.8	26 0.5	27 0	-2.8	-0.2	30 0	31 0	-0.3	-0.3	-0.3	-0.3	-0.3	37 0.5	-0.3	39	-0.3
				0	-2.8	0.5	0	-2.8	-0.2	0	0	-0.3	-0.3	-0.3	-0.3	-0.3	0.5	-0.3	_	
PLAY STOP	0	2.7	2.7			0.0												0.3	0	-0.3

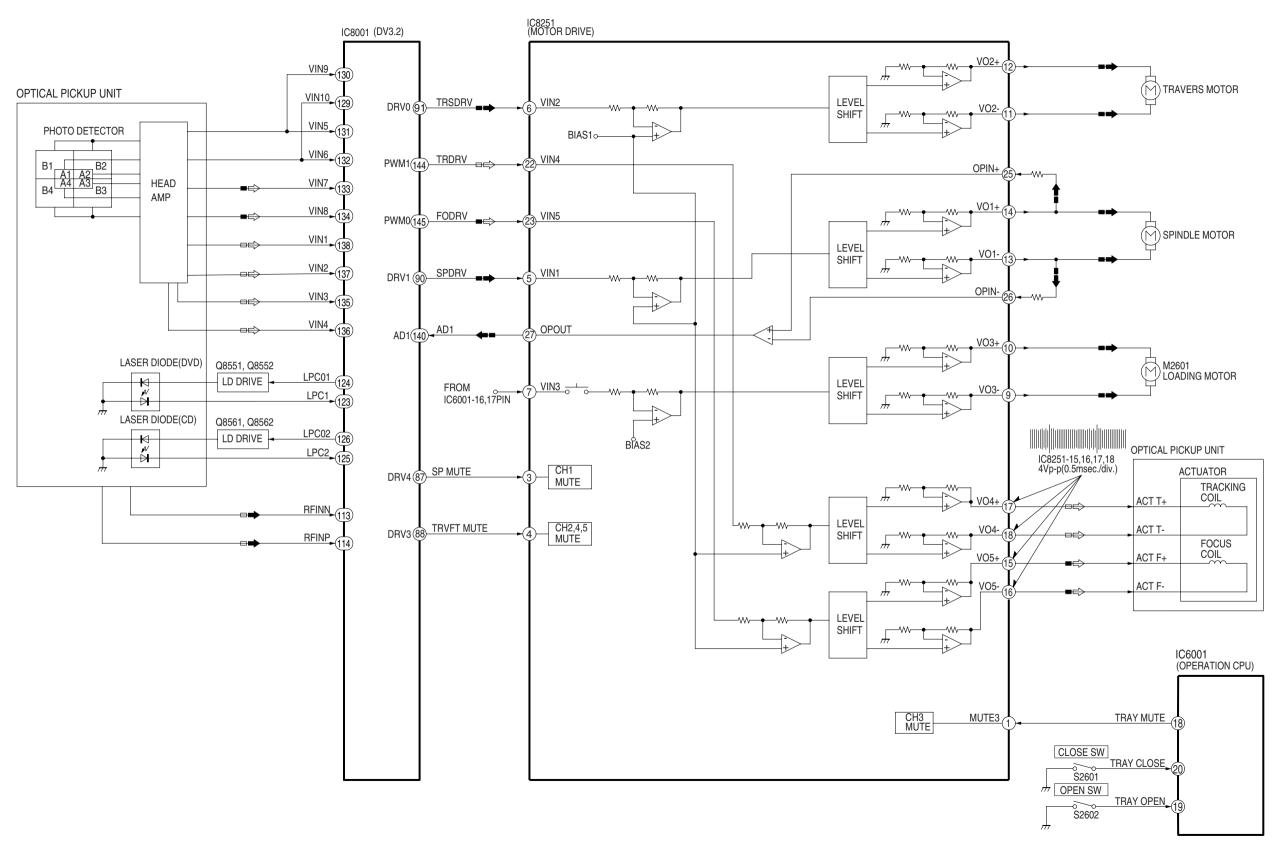
Ref No.	IC8651										Q8551				Q8552				Q8561	
MODE	1	2	3	4	5	6	7	8		В	С	Е		В	С	Е		В	С	Е
PLAY	-0.3	0	-0.3	0	0	0	0	-2.7		4.9	0	0		0	0	0		3.7	1.2	1.8
STOP	-0.3	0	-0.3	0	0	0	0	-2.7		4.9	0	0		0	0	0		4.9	0	0
Ref No.		Q8562					QR8	3111					QR8420				QR8420			
MODE	В	С	Е		1	2	3	4	5	6		В	С	Е		В	С	Е		
PLAY	0	0	3.7		0	0	1.2	0	0	4.6		1.7	0	0		3.3	3.3	0		
STOP	-2	0	0		0	0	1.2	0	0	1.6		0	0	3.3		-1.4	0	0		

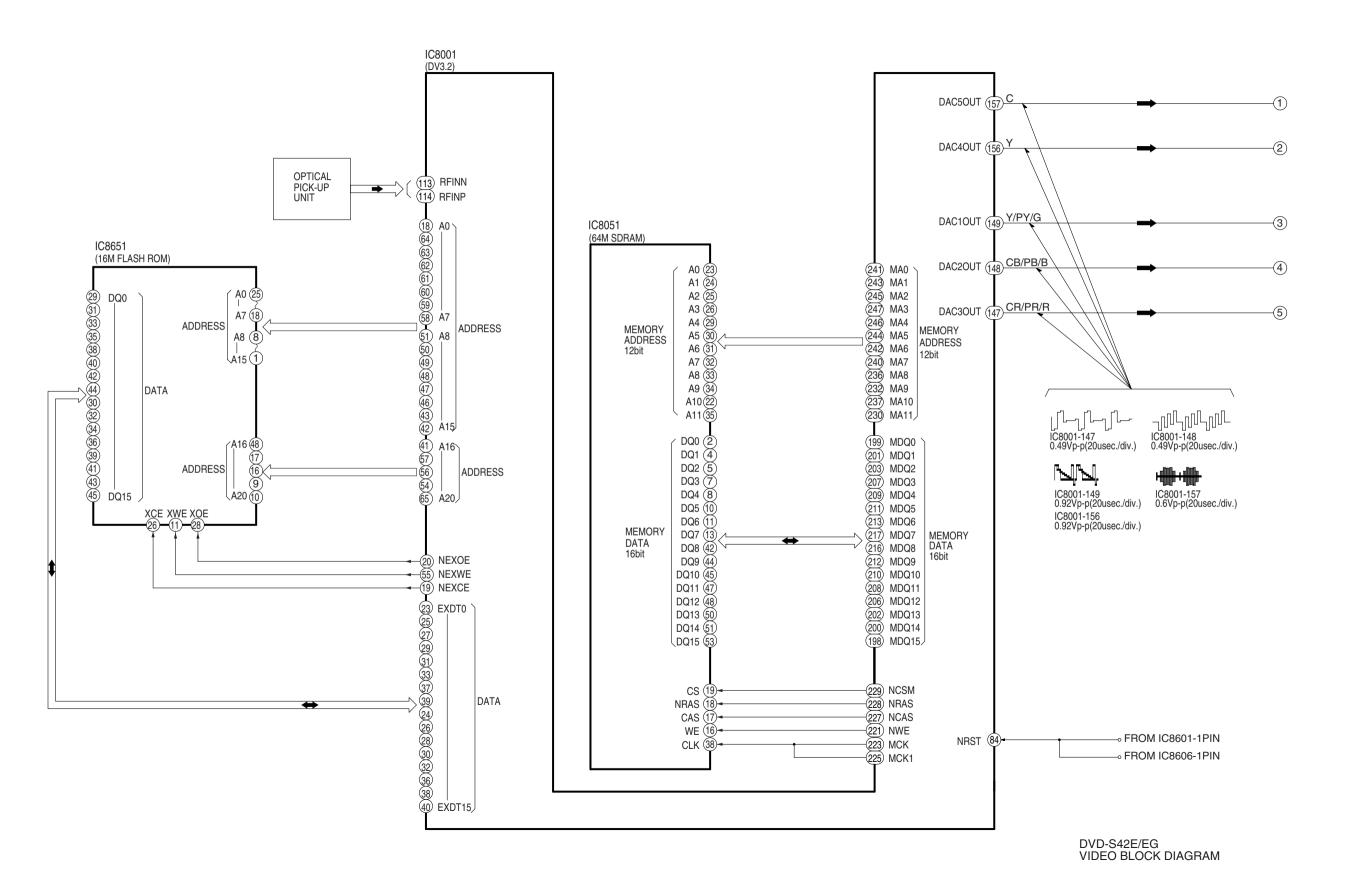
Ref No.				IC10	021						IC1101				IC1	151				
MODE	1	2	3	4	5	6	7	8		1	2	3		1	2	3	4	5		
PLAY	0	0.1	0.1	0.1	0.1	0.1	0	0.6		10.5	7.2	9.7		20.2	12.3		0	8.8		
STOP	0	0.1	0.1	0.1	0.1	0.1	0	0.6		10.5	7.2	9.7		12.3	3.2		0	0		
Ref No.			IC1	195																
MODE	1	2	3	4	5	6														$\Box$
PLAY	12.7	8.8	12	12.1		12.1														
STOP	13.9	8.9	12	12.1		12.1														
Ref No.								IC3									ļ			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	ļ			$\vdash$
PLAY	13.7	10.9	11.2	10.5	11.3	10.5	8.8	11	11	8.8	11	11	10.4	10.4	10.4	11				
STOP	13.7	10.9	11.2	10.5	11.4	10.5	8.9	10.9	10.9	8.9	11	0	10.4	10.4	10.3	11	<u> </u>	-		$\vdash$
Ref No. MODE	1	2	1C3	4	5	6		1	2	3	802 4	5	6				1			
PLAY	10.7	8.8	10.6	8.8	10.7	13.4		11.3	8.8	11.3	8.8	11.3	13.7		-		1	-		$\vdash$
STOP	10.7	8.8	10.6	8.8	10.7	13.4		11.3	8.8	11.3	8.8	11.3	13.7			_	1			$\vdash$
Ref No.	10.0	0.0	10.0	0.0	10.7	10.7		11.3	0.0		811	111.3	13.7							
MODE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	13.7	8.8	8.8	10.8	13.7	8.6	8.8	10.3	11	13.7	8.6	8.8	8.5	8.8	9.1	13.7	11.4	11.4	11.4	11.5
STOP	13.7	8.8	8.8	10.8	13.7	8.6	8.8	10.3	11	13.7	8.7	8.8	8.5	8.8	8.4	13.7	11.4	11.4	10.9	8.8
Ref No.		0.0	0.0			IC38					· ···	0.0	0.0	J.,	<u> </u>	1.0	1	····	. 0.0	0.0
MODE	21	22	23	24	25	26	27	28	29	30	31	32								$\vdash$
PLAY	11.5	11.5	18.8	11.5	8.8	10.1	8.9	8.8	10.2	10.2	8.9	11.1								$\Box$
STOP	11.2	8.8	11.5	11.6	8.8	10.1	10.1	8.8	10.2	10.2	8.8	11.1								
Ref No.				IC4	301															
MODE	1	2	3	4	5	6	7	8												
PLAY	11.4	11.3	11.3	-1.1	11.3	11.3	11.4	21												
STOP	2.6	2.5	2.5	-9.8	2.5	2.5	2.6	13												
Ref No.											001									
MODE	1	2	3	4	5	16	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	0	0	-3.3	3.3	3.3	3.3	3.3	1.7	1.6	0	0	3.2	0	3.3	1.6	1.6	3.3	0	0
STOP	0	0	0	3.3	3.3	3.3	3.3	3.3	1.7	1.6	0	0	3.2	0	3.3	1.6	1.6	3.3	3.2	0
Ref No.											001									
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3	0.6	1	1.1	0	0	0	0	3.2	3.3	3.3	-1.1	-1.7	12	8.8	12	1.8	1.9	1.8	1.9
STOP	2.9	0.7	1.1	1.1	0	0	0	0	3.3	3.3	1.7	2	-1.3	3.2	0	3.2	-6.9	-6.8	-6.8	-6.8
Ref No.	41	42	43	44	45	46	47	48	49	50	5001 51	52	53	54	55	56	57	58	59	60
MODE \ PLAY	1.9	2.2	2.2	-1.1	2.2	-1.1	2.2	-1.1	5.5	-1.1	-1.1	2.2	-1.1	-1.1	0	-1.1	-1.2	12	11.5	11.8
STOP	-3.1	-3.1	-3.2	-6.4	0	-6.4	-6.4	-9.7	-9.8	-6.5	-6.5	-6.5	0	0	-3.2	-3.2	-9.8	3.2	2.9	3
Ref No.	-3.1	-3.1    C60		-0.4	U	-0.4	-6.4 Q10		-9.0	-0.5	-0.5	-0.5	Q1		-3.2	-3.2	-9.6	3.2	Q3801	
MODE \	61	62	63	64		1	2	3	4		1	2	3	4	5	6	<b> </b>	В	C C	ΙE
PLAY	8.8	8.8	8.9	12.1		0	0	0	0		0	0	0	0	0	0	<b>1</b>	0	0	0
STOP	0.0	0.0	1	3.3		5.1	4.1	0.2	0.2		5	5	0	5.1	5	5		13.6	13.5	9.6
Ref No.			Q38						Q3851			<u> </u>	Q3852		<u> </u>		Q4302		1.5.5	
MODE	1	2	3	4	5	6		В	С	Е		В	С	Е		В	С	Е		
PLAY	0	0	0	0	0	0		0	0	0		0	0	0		0	0	0		
STOP	1.9	0	1.8	0	0	4.8		-3.3	-3.3	0.7		-3.3	-3.3	-6		0	0	0		
Ref No.		Q4422				Q4423				Q4751				Q6085				QR1115		
MODE	В	С	Е		В	С	Е		В	С	Е		В	С	Е		В	С	Е	
PLAY	0	0	0		0	0	0		0	0	0		0	0	0		0	0	0	
STOP	0	0	0.7		0	0	0.7		5	1.8	2.5		-6.4	-6.4	-5.7		0	0	0	
Ref No.		QR3501				QR3502				QR3821				QR3822				QR3823		
MODE	В	С	E		В	С	E		В	С	Е		В	С	E		В	С	Е	$\sqcup$
PLAY	0	0	0		0	0	0		0	0	0		0	0	0		0	0	0	$\sqcup$
STOP	0	0	3.2		2.5	0	0		13.5	0	0		0	0	4.8		9.6	12.9	0	$\vdash$
Ref No.		QR4302				QR4306														$\vdash$
MODE	В	C	E		В	C	E													$\vdash$
PLAY	0	0	0		0	0	0													$\vdash$
STOP	-5.9	0.1	0		-0.7	-3.3	-3.3				<u> </u>		<u> </u>		<u> </u>	<u> </u>	<u> </u>		<u> </u>	

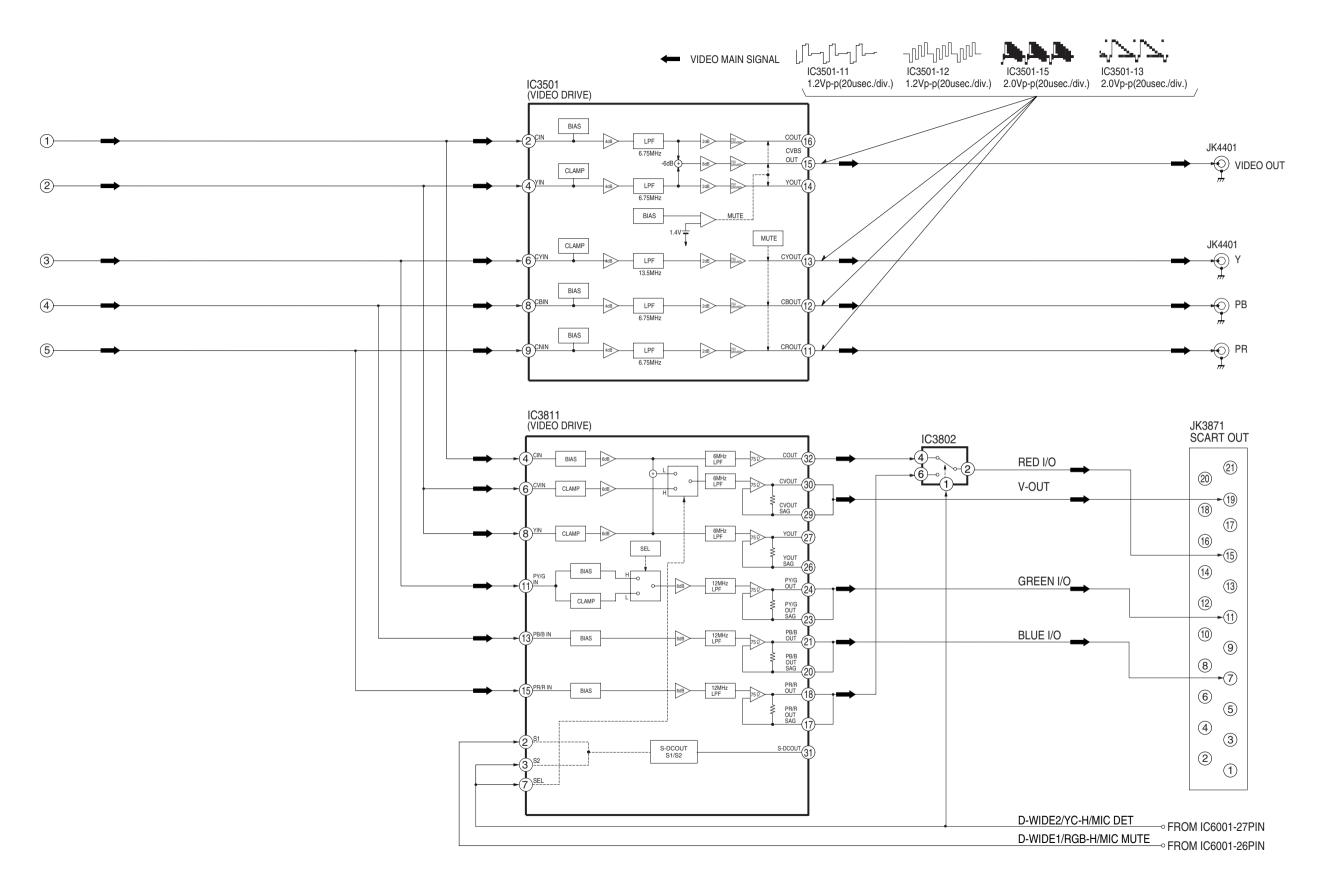






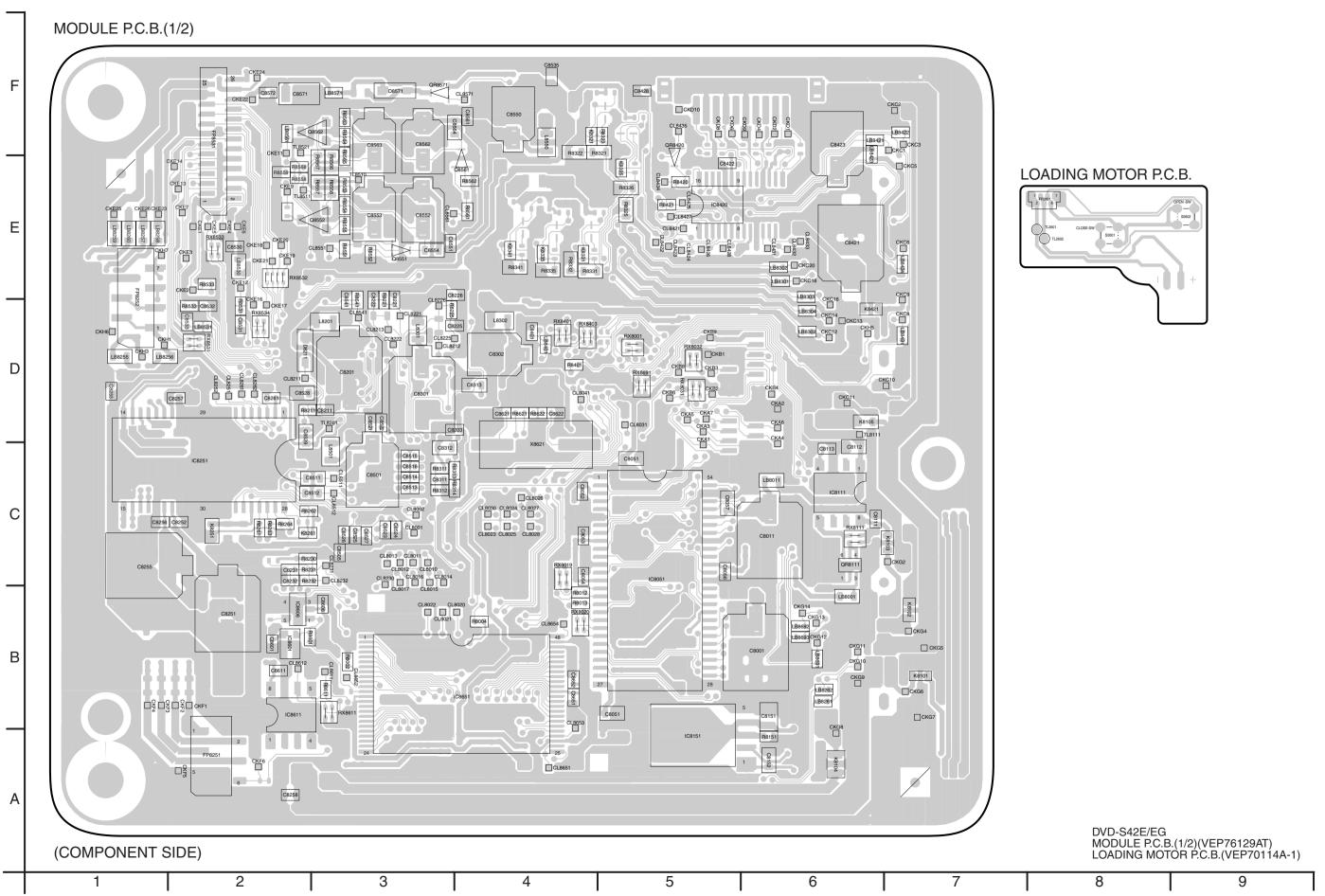


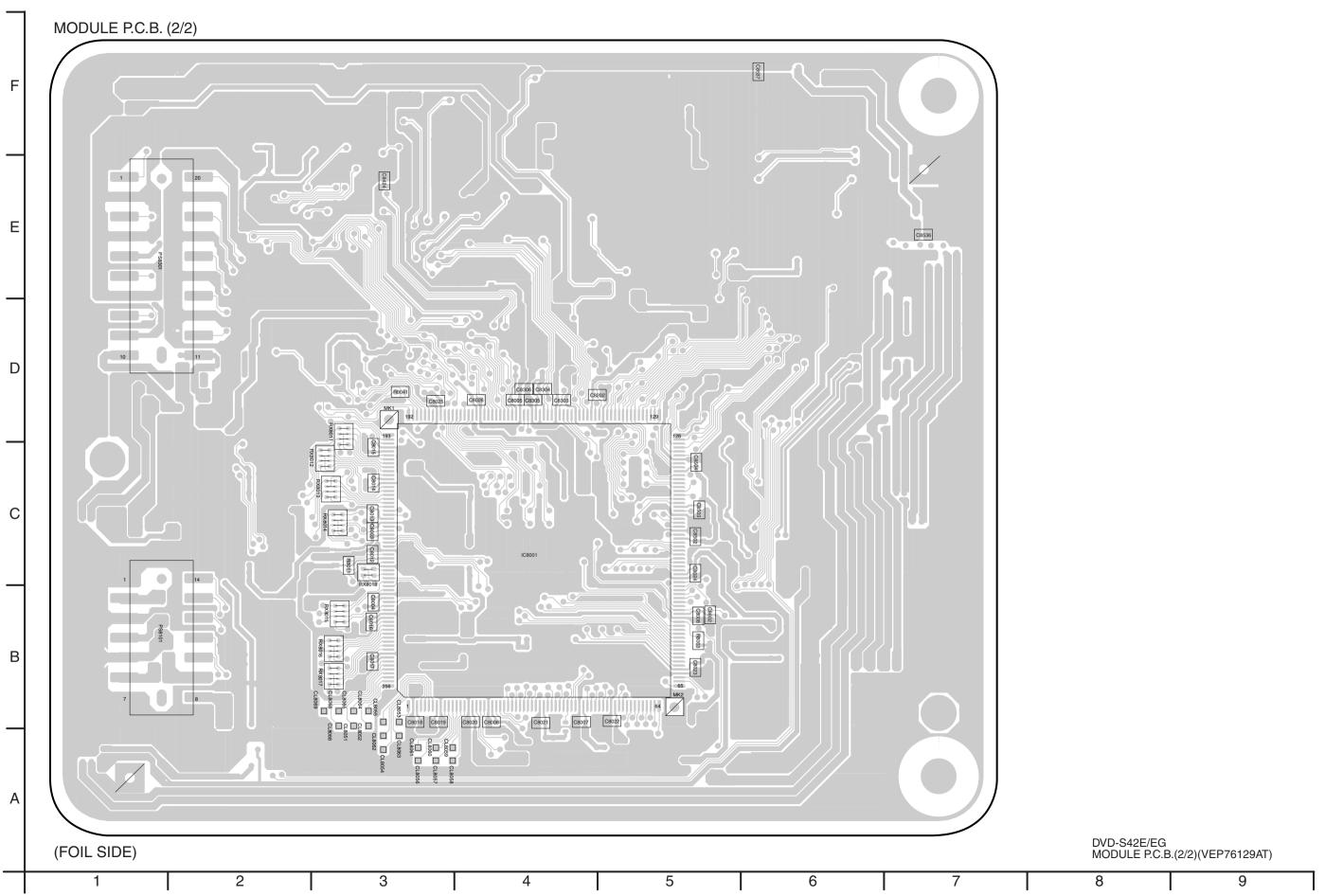




### Warning for Customers Who Use the DivX Video-on-Demand content.

- 1. The registration code has been changed for the repair of the product or the product exchange.
- 2. Obtain and register a new registration code, otherwise you will no longer be able to play DivX Video-on-Demand content.
- 3. Follow the procedure on the DivX Video-on-Demand web site to register at http://vod.divx.com/. (URL is valid as of April, 2005)
  - \* If you do not use the DivX Video-on-Demand content, please ignore this warning.





			MODU	LE P.C	.B.			
Transistor	•		CKB9	D-5	С	CKE12	E-2	С
Q8551	E-3	С	CKC1	F-7	С	CKE13	F-2	lc l
Q8552	E-3	C	CKC2	F-7	С	CKE14	E-2	c l
Q8561	E-4	C	CKC3	F-7	С	CKE16	E-2	lc l
Q8562	F-3	С	CKC5	E-7	С	CKE17	F-2	lc l
<b>Transistor</b>	-resist	or	CKC6	E-7	С	CKE18	E-2	lc l
QR8111	C-6	C	CKC8	D-7	С	CKE19	E-2	c l
QR8420	F-5	C	CKC9	D-7	С	CKE20	E-2	c l
QR8571	F-3	С	CKC10	D-7	С	CKE21	F-2	c l
Inntegrate	r e		CKC11	D-6	С	CKE22	F-2	c
IC8001	C-4	F	CKC12	D-6	С	CKE23	E-1	c
IC8051	B-5	С	CKC13	D-6	С	CKE24	F-2	c
IC8111	C-6	С	CKC14	D-6	С	CKE25	E-1	c
IC8151	A-5	С	CKC16	D-6	С	CKE26	E-1	C
IC8251	C-2	С	CKC18	E-6	С	CKF1	B-2	C
IC8420	E-5	С	CKC20	E-6	С	CKF2	B-2	C
IC8601	B-2	C	CKD1	F-6	С	CKF3	B-1	C
IC8611 IC8651	A-2 B-4	C	CKD2	F-6	С	CKF4	B-1	C
Test Point			CKD4	F-6	С	CKF5	A-2	C
CKA1	C-5	С	CKD6	F-5	С	CKF6	A-2	c
CKA1	D-6	C	CKD8	F-5	С	CKG2	C-7	C
CKA2	D-5	C	CKD9	F-6	С	CKG4	B-7	C
CKA4	C-6	C	CKD10	F-5	С	CKG5	B-7	C
CKA5	D-5	C	CKE1	E-2	С	CKG6	B-7	C
CKA6	D-6	C	CKE2	E-2	С	CKG7	B-7	C
CKA7	D-5	C	CKE3	E-2	С	CKG8	A-6	C
CKB1	D-5	C	CKE4	E-2	С	CKG9	B-6	C
CKB2	D-5	C	CKE5	E-2	С	CKG10	B-6	C
CKB3	D-5	C	CKE6	E-2	С	CKG11	B-6	C
CKB4	D-6	C	CKE7	E-2	С	CKG12	B-6	C
CKB6	D-5	С	CKE9	E-2	С	CKG13	B-6	C
CKB8	D-5	С	CKE11	F-2	С	CKG14	B-6	C

ADDRESS INFORMATION
C.....COMPONENT SIDE
F.....FOIL SIDE

			MODU	LE P.C	.B.			
Test Point			CL8222	D-3	С	CL8651	A-4	С
CKH1	D-1	С	CL8225	D-4	С	CL8652	B-3	c
СКН3	D-1	С	CL8226	D-3	С	CL8653	B-4	С
CKH5	D-6	С	CL8230	C-3	С	CL8654	B-4	c
CKH6	D-1	С	CL8231	C-3	С	TL8111	D-6	С
CKH7	E-1	С	CL8232	C-3	С	TL8201	D-3	c
CL8001	C-3	С	CL8251	D-2	С	TL8510	E-3	c
CL8002	C-3	С	CL8252	D-2	С	TL8511	E-2	c
CL8010	C-3	С	CL8261	D-2	С	TL8521	F-2	lc l
CL8011	C-3	С	CL8262	D-2	С	Connector	<u> </u>	
CL8012	C-3	С	CL8421	E-5	С	FP8251	A-2	С
CL8013	C-3	С	CL8422	E-5	С	FP8252	E-1	c
CL8014	C-3 C-3	С	CL8423	E-5	С	FP8531	F-2	С
CL8015 CL8016	C-3	С	CL8424	E-5	С	PS8101	B-1	F
CL8016 CL8017	C-3	С	CL8425	E-5	С	PS8301	E-1	F
CL8017	B-4	С	CL8426	E-5	С			
CL8020 CL8021	B-3	С	CL8427	E-5	С			
CL8021	B-3	С	CL8428	E-5	С			
CL8023	C-4	С	CL8431	E-6	С			
CL8024	C-4	С	CL8432	E-6	С			
CL8025	C-4	С	CL8433	E-6	С			
CL8026	C-4	С	CL8434	E-5	С			
CL8027	C-4	С	CL8435	F-5	С			
CL8028	C-4	С	CL8511	C-3	С			
CL8030	C-4	С	CL8512	C-3	С			
CL8031	D-5	С	CL8541	D-3	С			
CL8041	D-4	С	CL8551	E-3	С			
CL8211	D-2	С	CL8561	E-3	С			
CL8212	D-3	С	CL8571	F-4	С			
CL8213	D-3	С	CL8611	B-3	С			
CL8221	D-3	С	CL8612	B-2	С			

